

chain bonds :

10-17 12-21 13-17 14-20 22-23

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-10 7-8 8-9 9-10 11-12 11-16 12-13 13-14  
14-15 15-16

exact/norm bonds :

22-23

exact bonds :

10-17 12-21 13-17 14-20

normalized bonds :

1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-10 7-8 8-9 9-10 11-12 11-16 12-13 13-14  
14-15 15-16

isolated ring systems :

containing 1 : 11 :

Match level :

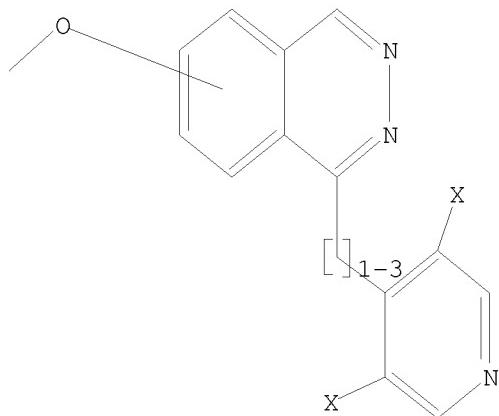
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom  
11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:CLASS 20:CLASS 21:CLASS  
22:CLASS 23:CLASS 24:Atom

L1 STRUCTURE UPLOADED

=&gt; d 11

L1 HAS NO ANSWERS

L1 STR



Structure attributes must be viewed using STN Express query preparation.

=&gt; s 11

SAMPLE SEARCH INITIATED 10:10:12 FILE 'REGISTRY'  
SAMPLE SCREEN SEARCH COMPLETED - 11 TO ITERATE100.0% PROCESSED 11 ITERATIONS  
SEARCH TIME: 00.00.01

7 ANSWERS

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
                           BATCH \*\*COMPLETE\*\*  
 PROJECTED ITERATIONS:       22 TO       418  
 PROJECTED ANSWERS:          7 TO       298

L2                   7 SEA SSS SAM L1

=> s 11 sss full  
 FULL SEARCH INITIATED 10:10:19 FILE 'REGISTRY'  
 FULL SCREEN SEARCH COMPLETED -       170 TO ITERATE

100.0% PROCESSED       170 ITERATIONS                           137 ANSWERS  
 SEARCH TIME: 00.00.01

L3                   137 SEA SSS FUL L1

=> file caplus  
 COST IN U.S. DOLLARS   SINCE FILE                           TOTAL  
    ENTRY                                   SESSION  
 FULL ESTIMATED COST   178.36                           178.57

FILE 'CAPLUS' ENTERED AT 10:10:24 ON 10 APR 2008  
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=> s 13  
 L4                   15 L3

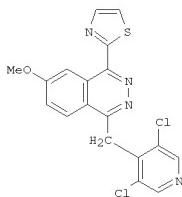
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L4 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2005:1218618 CAPLUS  
 DOCUMENT NUMBER: 143:472578  
 TITLE: Agonists of A2A adenosine receptors for treatment of diabetic nephropathy  
 INVENTOR(S): Okusa, Mark D.; Linden, Joel M.; MacDonald, Timothy L.; Awad, Alaa S.  
 PATENT ASSIGNEE(S): University of Virginia Patent Foundation, USA  
 SOURCE: PCT Int. Appl., 95 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005107463	A1	20051117	WO 2005-US15241	20050503
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GR, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
BW, GH, GN, KE, LS, MW, ME, NA, SD, SL, SZ, TZ, UG, ZM, ZW, NM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 20050261236	A1	20051124	US 2005-121169	20050503
EP 1746885	A1	20070131	EP 2005-756109	20050503
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR				
JP 2007536241	T	20071213	JP 2007-511486	20050503
PRIORITY APPLN. INFO.:			US 2004-567465P	P 20040503
		WO 2005-US15241		W 20050503

OTHER SOURCE(S): MARPAT 143:472578  
 AB The present invention provides a therapeutic method for treating diabetic kidney disease, e.g., diabetic nephropathy that includes the administration of an effective amount of an A2A adenosine receptor agonist.  
 Optionally, the method includes administration of a type IV PDE inhibitor.  
 IT 256442-88-3  
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (A2A adenosine receptor agonists for treatment of diabetic nephropathy)  
 RN 256442-88-3 CAPLUS  
 CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-4-phenyl-(CA INDEX NAME)

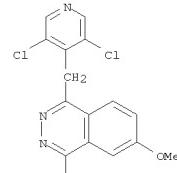
L4 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2005:520774 CAPLUS  
 DOCUMENT NUMBER: 143:165999  
 TITLE: Phthalazine PDE IV inhibitors: Conformational study  
 of some 6-methoxy-1,4-disubstituted derivatives  
 AUTHOR(S): Haack, Thomas; Fattori, Raimondo; Napoletano, Mauro;  
 Pellacini, Franco; Franza, Giovanni; Raffaini, Giuseppina; Ganazzoli, Fabio  
 Zambon Group, Inpharzan Riccerche, Taverne, 6807, Svizz.  
 SOURCE: Bicorganic & Medicinal Chemistry (2005), 13(14), 4425-4433  
 CODEN: BMECEP; ISSN: 0968-0896  
 PUBLISHER: Elsevier Ltd.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 143:165999  
 GI



AB This report describes the detailed conformational anal. and synthesis of a series of phthalazine phosphodiesterase-type (IV) (PDE IV) inhibitors bearing either mono- or dichloro 4-methylenepyridine at the 'down' position of the phthalazine nucleus or different heterocycles at the top' position 4 of the phthalazine moiety. Both the mono- and dichloro 4-methylenepyridine units linked at carbon Cl 1 of the phthalazine nucleus show identical conformational behavior with the substituent preferentially oriented towards the external part of the mol. and the pyridine plane almost orthogonal to that of phthalazine ring. The heterocyclic five-membered rings linked at carbon C4 of phthalazine show quite different conformational behavior. The 1,3-thiazole ring exists in a well-defined conformation almost coplanar with respect to the phthalazine nucleus while the 1,2,4-triazole and the 1,3-diazole heterocycles show a great conformational freedom with large torsion angles. Compound I bearing the thiazole ring at C4 displays the major biol. activity, thus suggesting

Habte

L4 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

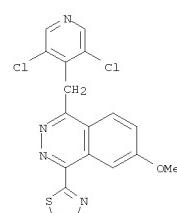


REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

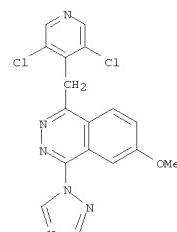
L4 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)  
 favor that a planar and rather rigid conformation of the pentacycle should

IT 256443-09-1P 256443-12-6 256443-28-4P  
 RL: PRP (Properties); SPP (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

RN 256443-09-1 CAPLUS  
 CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-4-(2-thiazolyl)- (CA INDEX NAME)



RN 256443-12-6 CAPLUS  
 CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-4-(1H-1,2,4-triazol-1-yl)- (CA INDEX NAME)

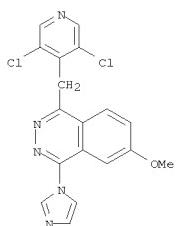


RN 256443-28-4 CAPLUS  
 CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-4-(1H-imidazol-1-yl)-6-methoxy- (CA INDEX NAME)

04/10/2008

L4 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN

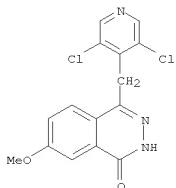
(Continued)



IT 256443-02-4P 256443-81-9P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(conformational anal. of phthalazine PDE IV inhibitors)

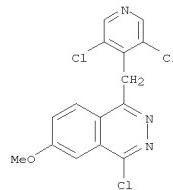
RN 256443-02-4 CAPLUS

CN 1(2H)-Phthalazinone, 4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy- (CA INDEX NAME)



RN 256443-81-9 CAPLUS  
CN Phthalazine, 4-chloro-1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-  
(CA INDEX NAME)

L4 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



REFERENCE COUNT: THIS 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L4 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005136544 CAPLUS

DOCUMENT NUMBER: 142:219294

TITLE: Preparation of 4-substituted

7-alkoxy-2-amino sulfonyl

1,2-dihydro-phthalazine derivatives as phosphodiesterase 4 inhibitors for the treatment of allergy and inflammation

INVENTOR(S): Napoleano, Mauro; Haack, Thomas; Maceccchini, Silvia; Piperno, Lara; Moriggi, Jean-Dominique; Morazzoni, Gabriele; Allievi, Leopoldo; Moriggi, Emanuele; Peillacini, Franco

PATENT ASSIGNEE(S): Zambon Group S.p.A., Italy

SOURCE: PCT Int. Appl., 64 pp.

DOCUMENT TYPE: Patent

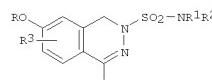
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

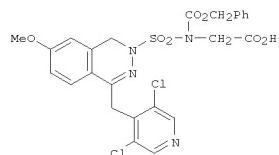
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005013995	A1	20050217	WO 2004-EP7714	20040713
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, ML, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
PRIORITY APPLN. INFO.:		IT 2003-MI1451		A 20030716
OTHER SOURCE(S):		CASREACT 142:219294; MARPAT 142:219294		GI

L4 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



I



II

AB Compds. of formula I [R = alkyl, fluoroalkyl; R1, R2 = H, alkyl, cycloalkyl, aryl, heterocyclyl, alkoxy carbonyl, etc.; R3 = H, alkyl, fluoroalkyl; Z = CH2, (di)fluoromethylene, NH; A = (substituted) Ph, (substituted) heteroaryl] are prepared as phosphodiesterase 4 (PDE4) inhibitors for the treatment of allergic and inflammatory pathologies, such as ARDS, COPD, asthma and allergic rhinitis. Thus, II was prepared, and had 98.92% inhibition of PDE4 at 10-7 M concentration

IT 256443-81-9

RL: RCT (Reactant); RACT (Reactant or reagent)  
(preparation of alkoxy-amino sulfonyl-dihydropthalazine derivs. as

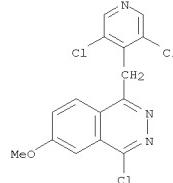
PDE4

inhibitors for the treatment of allergy and inflammation)

RN 256443-81-9 CAPLUS

CN Phthalazine, 4-chloro-1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-  
(CA INDEX NAME)

INDEX NAME)



REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L4 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

L4 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2004:550877 CAPLUS  
 DOCUMENT NUMBER: 141:89108  
 TITLE: Preparation of (pyridinylmethyl)phthalazine derivatives as phosphodiesterase 4 inhibitors

INVENTOR(S): Napoletano, Mauro; Pellacini, Franco; Morazzone, Gabriele; Moriggi, Jean-Dominique; Riva, Carlo;

Haack, Thomas; Allievi, Leopoldo; Pauselli, Marco

Zambon Group S.p.A., Italy

SOURCE: PCT Int. Appl., 38 pp.

CODEN: PIXX02

DOCUMENT TYPE: Patent

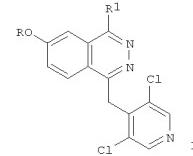
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004056366	A1	20040708	WO 2003-EP14733	20031222
W: AU, CA, CN, IL, JP, NZ, RU, US				
RU: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR				
CA 2511182	A1	20040708	CA 2003-2511182	20031222
AU 2003298228	A1	20040714	AU 2003-398228	20031222
EP 1581229	A1	20051005	EP 2003-795950	20031222
EP 1581229	B1	20080112		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
CN 1753679	A	20060329	CN 2003-80109928	20031222
JP 2006516127	T	20060622	JP 2004-561411	20031222
AT 388710	T	20080315	AT 2003-795950	20031222
US 20060166996	A1	20060727	US 2006-540273	20060109
PRIORITY APPLN. INFO.:			IT 2002-M12739	A 20021223
			WO 2003-EP14733	W 20031222

OTHER SOURCE(S): MARPAT 141:89108  
 GI



L4 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

AB Title compds. I [wherein R = Me or CHF<sub>2</sub>; R<sub>1</sub> = (un)substituted Ph or aromatic heterocycle; and pharmaceutically acceptable salts thereof] were prepared as phosphodiesterase (PDE) 4 inhibitors. For example, coupling reaction of 4-chloro-1-[(3,5-dichloropyridin-4-yl)methyl]-6-methoxyphthalazine with 4-carboxyphenylboronic gave I (R = Me, R<sub>1</sub> = 4-HO<sub>2</sub>CC<sub>6</sub>H<sub>4</sub>) in 58% yield.

The prepared title compds. I showed selectively inhibition of PDE 4 enzyme, and inhibition of TNF<sub>α</sub> in whole human blood. Thus, I and their pharmaceutical compns. are useful as PDE 4 inhibitors for the treatment of

allergy and respiratory tract disease (no data).

IT 717103-19-6P 717109-24-5P 717109-29-0P

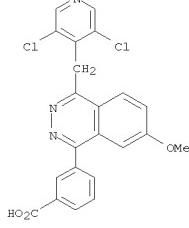
717109-34-7P

RL: PAC (Pharmacological activity); PKT (Pharmacokinetics); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of [(pyridin-4-yl)methyl]phthalazine derivs. as phosphodiesterase 4 inhibitors)

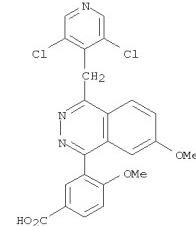
RN 717103-19-8 CAPLUS

CN Benzoic acid, 3-[4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl]- (CA INDEX NAME)

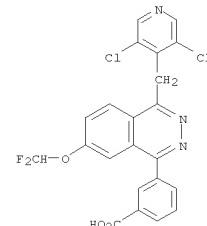


RN 717103-24-5 CAPLUS  
 CN Benzoic acid, 3-[4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl]-4-methoxy- (CA INDEX NAME)

L4 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

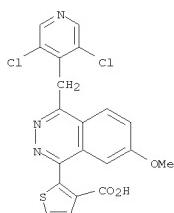


RN 717109-29-0 CAPLUS  
 CN Benzoic acid,  
 3-[4-[(3,5-dichloro-4-pyridinyl)methyl]-7-(difluoromethoxy)-1-phthalazinyl]- (CA INDEX NAME)



RN 717109-34-7 CAPLUS  
 CN 3-Thiophencarboxylic acid, 2-[4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl]- (CA INDEX NAME)

L4 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

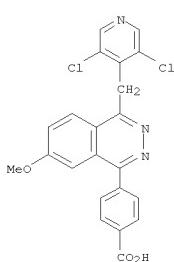


IT 717109-18-7P 717109-20-1P 717109-22-3P  
717109-25-6P 717109-28-9P 717109-32-5P  
717109-36-9P 717109-37-0P 717109-38-1P  
717109-39-2P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES ('Uses')  
(preparation of [(pyridin-4-yl)methyl]phthalazine derivs. as phosphodiesterase 4 inhibitors)

RN 717109-18-7 CAPLUS

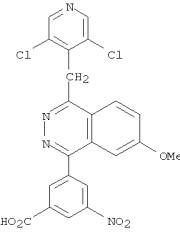
CN Benzoic acid, 4-[4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl]- (CA INDEX NAME)



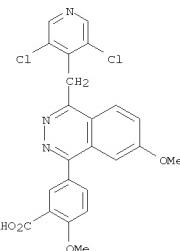
RN 717109-20-1 CAPLUS

CN Benzoic acid, 3-[4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-

L4 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (CA INDEX NAME) (Continued)



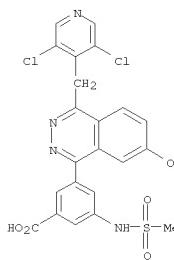
RN 717109-22-3 CAPLUS  
CN Benzoic acid, 5-[4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl]-2-methoxy- (CA INDEX NAME)



RN 717109-25-6 CAPLUS

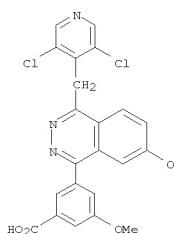
CN Benzoic acid, 3-[4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl]-5-[(methylsulfonyl)amino]- (CA INDEX NAME)

L4 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



RN 717109-28-9 CAPLUS

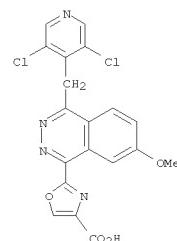
CN Benzoic acid, 3-[4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl]-5-methoxy- (CA INDEX NAME)



RN 717109-32-5 CAPLUS

CN 4-Oxazolecarboxylic acid, 2-[4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl]- (CA INDEX NAME)

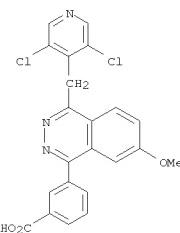
L4 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (CA INDEX NAME) (Continued)



RN 717109-36-9 CAPLUS

CN D-Glucitol, 1-deoxy-1-(methylamino)-, 3-[4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl]benzoate (salt) (9CI) (CA INDEX NAME)

CM 1

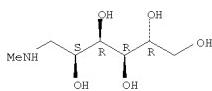
CRN 717109-19-8  
CMF C22 H15 Cl2 N3 O3

CM 2

CRN 6284-40-8  
CMF C7 H17 N O5

Absolute stereochemistry.

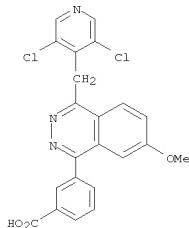
L4 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



RN 717109-37-0 CAPLUS  
 CN Benzoic acid, 3-[4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl]-, compd. with 2-amino-2-(hydroxymethyl)-1,3-propanediol (1:1) (CA INDEX NAME)

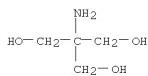
CM 1

CRN 717109-19-8  
 CMF C22 H15 Cl2 N3 O3

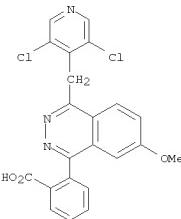


CM 2

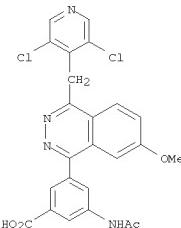
CRN 77-86-1  
 CMF C4 H11 N O3



RN 717109-38-1 CAPLUS  
 CN Benzoic acid, 2-[4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-

L4 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)  
 phtalazinyl]- (CA INDEX NAME)

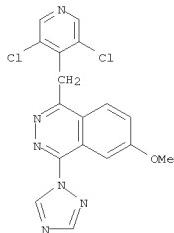
RN 717109-39-2 CAPLUS  
 CN Benzoic acid, 3-(acetylamo)-5-[4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl]- (CA INDEX NAME)



IT 256443-12-6 256443-32-0 256443-43-3  
 RL: PKT (Pharmacokinetics); BIOL (Biological study)  
 (preparation of [(pyridin-4-yl)methyl]phthalazine derivs. as phosphodiesterase 4 inhibitors)

RN 256443-12-6 CAPLUS  
 CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-4-(1H-1,2,4-triazol-1-yl)- (CA INDEX NAME)

L4 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

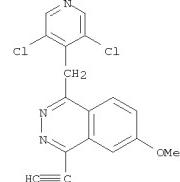


RN 256443-32-0 CAPLUS  
 CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-4-(1-pyrrolidinyl)- (CA INDEX NAME)



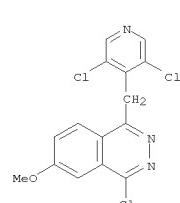
RN 256443-43-3 CAPLUS  
 CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-4-ethynyl-6-methoxy- (CA INDEX NAME)

L4 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



IT 256443-81-9 256443-97-7  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation of [(pyridin-4-yl)methyl]phthalazine derivs. as phosphodiesterase 4 inhibitors)

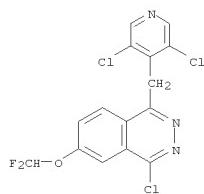
RN 256443-81-9 CAPLUS  
 CN Phthalazine, 4-chloro-1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy- (CA INDEX NAME)



RN 256443-97-7 CAPLUS  
 CN Phthalazine, 4-chloro-1-[(3,5-dichloro-4-pyridinyl)methyl]-6-(difluoromethoxy)- (CA INDEX NAME)

L4 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN

(Continued)

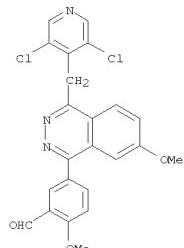


IT 717109-21-2P 717109-23-4P 717109-26-7P  
717109-30-3P 717109-31-4P 717109-33-6P  
717109-35-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation of [(pyridin-4-yl)methyl]phthalazine derivs. as phosphodiesterase 4 inhibitors)

RN 717109-21-2 CAPLUS

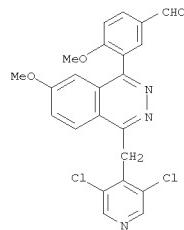
CN Benzaldehyde, 5-[4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl]-2-methoxy- (CA INDEX NAME)



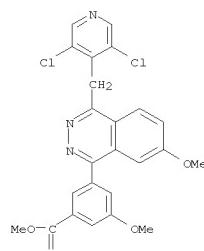
RN 717109-23-4 CAPLUS

CN Benzaldehyde, 3-[4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl]-4-methoxy- (CA INDEX NAME)

L4 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



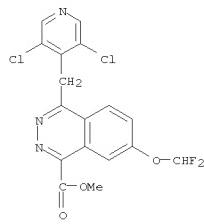
RN 717109-26-7 CAPLUS  
CN Benzoic acid, 3-[4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl]-5-methoxy-, methyl ester (CA INDEX NAME)



RN 717109-30-3 CAPLUS

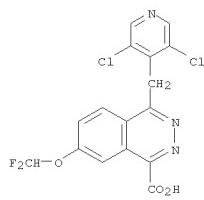
CN 1-Phthalazinecarboxylic acid, 4-[(3,5-dichloro-4-pyridinyl)methyl]-7-(difluoromethoxy)-, methyl ester (CA INDEX NAME)

L4 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



RN 717109-31-4 CAPLUS

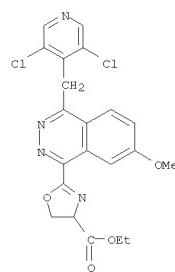
CN 1-Phthalazinecarboxylic acid, 4-[(3,5-dichloro-4-pyridinyl)methyl]-7-(difluoromethoxy)- (CA INDEX NAME)



RN 717109-33-6 CAPLUS

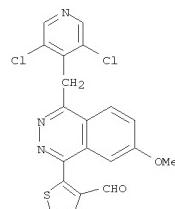
CN 4-Oxazolecarboxylic acid, 2-[4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl]-4,5-dihydro-, ethyl ester (CA INDEX NAME)

L4 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



RN 717109-35-8 CAPLUS

CN 3-Thiophencarboxaldehyde, 2-[4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl]- (CA INDEX NAME)



L4 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:546494 CAPLUS

DOCUMENT NUMBER: 141:89105

TITLE: Preparation of [(pyridinyl)methyl]phthalazine derivatives as phosphodiesterase 4 inhibitors

Napoletano, Mauro; Pellacini, Franco; Morazzoni, Gabriele; Macechini, Silvia; Pippo, Lara; Haak,

Thomas; Allievi, Leopoldo; Moriggi, Ermanno

INVENTOR(S): Zambon Group S.p.A., Italy

PATENT ASSIGNEE(S): PCT Int. Appl., 48 pp.

DOCUMENT TYPE: Patent

LANGUAGE: English

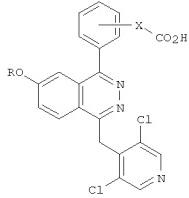
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004056798	A1	20040708	WO 2003-EP14731	20031222
WI: AU, CA, CN, IL, JP, NZ, RU, US RN: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR				
AU 2003296708	A1	20040714	AU 2003-296708	20031222
			IT 2002-MI2738	A 20021223
PRIORITY APPLN. INFO.:				
			WO 2003-EP14731	W 20031222

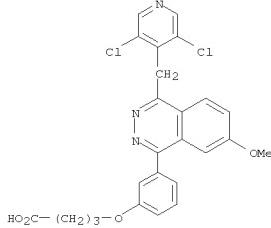
OTHER SOURCE(S): MARPAT 141:89105

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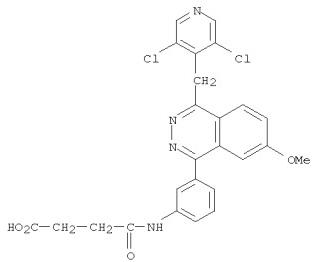
AB Title compds. I [wherein R = Me or CHF<sub>2</sub>; X = methylene group, ethylene, -CH=CH-, -OCH<sub>2</sub>-, -O(CH<sub>2</sub>)<sub>2</sub>, -NHCO<sub>2</sub>(CH<sub>2</sub>)<sub>3</sub>-, etc.; and pharmaceutically acceptable salts thereof] were prepared as phosphodiesterase (PDE) 4 inhibitors. For example, I (R = Me, X = -OCH<sub>2</sub>-) was given in multi-step synthesis starting from 4-chloro-1-[(3,5-dichloropyridin-4-yl)methyl]-6-

L4 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



RN 717107-20-5 CAPLUS

CN Butanoic acid, 4-[(3-[4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl]phenyl)amino]-4-oxo- (CA INDEX NAME)



RN 717107-25-0 CAPLUS

CN 2-Propenoic acid, 3-[3-[4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl]phenyl]- (CA INDEX NAME)

L4 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)  
methoxyphthalazine. The prep'd. title compds. I showed selectively inhibition of PDE 4 enzyme, and inhibition of TNF<sub>α</sub> in whole human blood. Thus, I and their pharmaceutical compns. are useful as PDE 4 inhibitors for the treatment of allergy and respiratory tract disease (no data).

IT 717107-11-4P 717107-13-6P 717107-20-5P

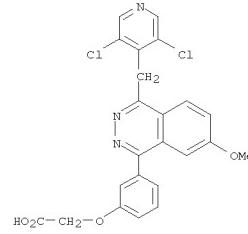
717107-25-0P 717107-28-3P 717107-30-7P

717107-34-1P 717107-37-4P 717107-46-5P

RL PAC (Pharmacological activity); PKT (Pharmacokinetics); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(preparation of (phenyl)(pyridinylmethyl)phthalazine derivs. as phosphodiesterase 4 inhibitors)

RN 717107-11-4 CAPLUS

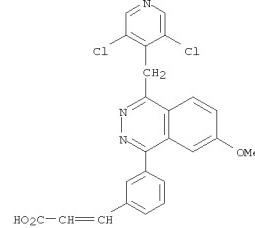
CN Acetic acid, [3-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl]phenoxy- (CA INDEX NAME)



RN 717107-13-6 CAPLUS

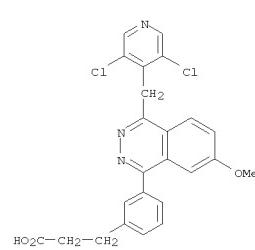
CN Butanoic acid, 4-[(3-[4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl]phenoxy)- (CA INDEX NAME)

L4 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



RN 717107-28-3 CAPLUS

CN Benzenepropanoic acid, 3-[4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl]- (CA INDEX NAME)

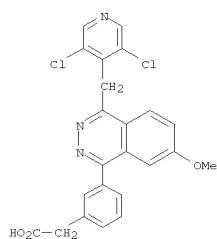


RN 717107-30-7 CAPLUS

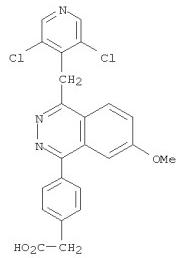
CN Benzenoacetic acid, 3-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl- (CA INDEX NAME)

L4 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN

(Continued)

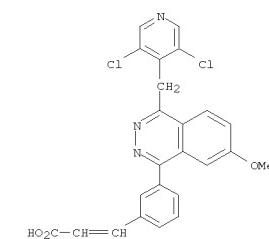


RN 717107-34-1 CAPLUS  
CN Benzeneacetic acid, 4-[4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl]- (CA INDEX NAME)

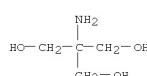


RN 717107-37-4 CAPLUS  
CN 2-Propenoic acid, 3-[3-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl]phenyl-, compd. with 2-amino-2-(hydroxymethyl)-1,3-propanediol (1:1) (CA INDEX NAME)  
CM 1  
CRN 717107-25-0  
CMF C24 H17 C12 N3 O3

L4 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

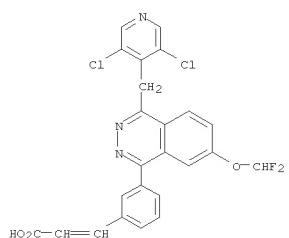


CM 2  
CRN 77-86-1  
CMF C4 H11 N O3

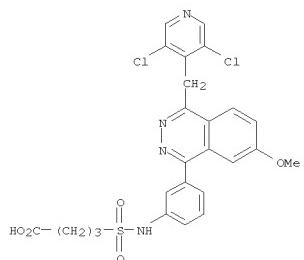


RN 717107-46-5 CAPLUS  
CN 2-Propenoic acid, 3-[3-[(3,5-dichloro-4-pyridinyl)methyl]-7-(difluoromethoxy)-1-phthalazinyl]phenyl- (CA INDEX NAME)

L4 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

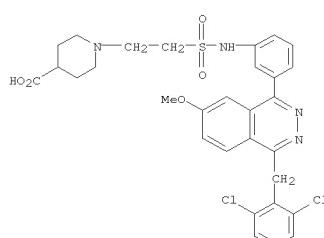


IT 717107-17-0P 717107-19-2P 717107-21-6P  
717107-23-8P 717107-24-9P 717107-26-3P  
717107-27-2P 717107-31-8P 717107-36-3P  
717107-38-5P 717107-45-4P  
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(preparation of (phenyl)(pyridinylmethyl)phthalazine derivs. as phosphodiesterase 4 inhibitors)  
RN 717107-27-0 CAPLUS  
CN Butanoic acid, 4-[[3-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl]phenyl]amino]sulfonyl]- (CA INDEX NAME)

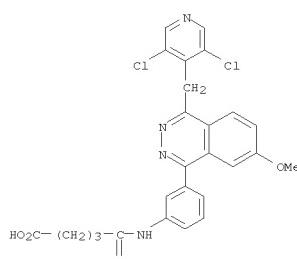


RN 717107-19-2 CAPLUS  
CN 4-Piperidinocarboxylic acid, 1-[2-[[3-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl]phenyl]amino]sulfonyl]ethyl]- (CA INDEX NAME)

L4 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



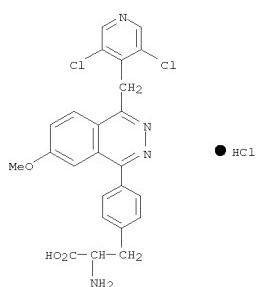
RN 717107-21-6 CAPLUS  
CN Pentanoic acid, 5-[[3-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl]phenyl]amino]-5-oxo- (CA INDEX NAME)



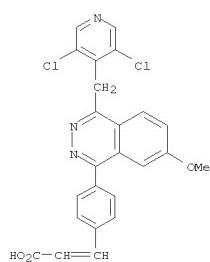
RN 717107-23-8 CAPLUS  
CN Phenylalanine, 4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl-, monohydrochloride (9CI) (CA INDEX NAME)

L4 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN

(Continued)

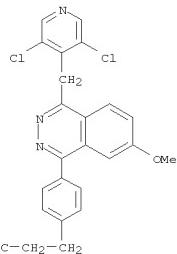


RN 717107-24-9 CAPLUS  
 CN 2-Propenoic acid, 3-[4-[4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl]phenyl]- (CA INDEX NAME)

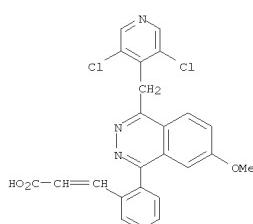


RN 717107-26-1 CAPLUS  
 CN Benzenepropanoic acid,  
 4-[4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl]- (CA INDEX NAME)

L4 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

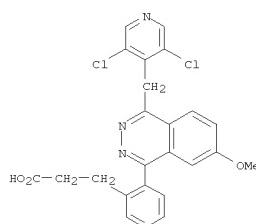


RN 717107-27-2 CAPLUS  
 CN 2-Propenoic acid, 3-[2-[4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl]phenyl]- (CA INDEX NAME)



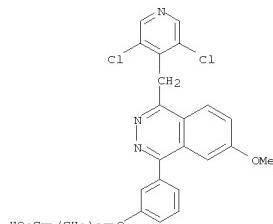
RN 717107-31-8 CAPLUS  
 CN Benzenepropanoic acid,  
 2-[4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl]- (CA INDEX NAME)

L4 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



RN 717107-36-3 CAPLUS  
 CN D-Glucitol, 1-deoxy-1-(methylamino)-, 4-[3-[4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl]phenoxyl]butanoate (salt) (9CI)  
 (CA INDEX NAME)

CM 1

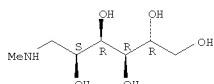
CRN 717107-13-6  
 CMF C25 H21 Cl2 N3 O4

CM 2

CRN 6284-40-8  
 CMF C7 H17 N O5

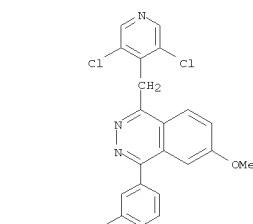
Absolute stereochemistry.

L4 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



RN 717107-38-5 CAPLUS  
 CN D-Glucitol, 1-deoxy-1-(methylamino)-, 3-[3-[4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl]phenyl]-2-propenoate (salt)  
 (9CI) (CA INDEX NAME)

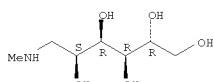
CM 1

CRN 717107-25-0  
 CMF C24 H17 Cl2 N3 O3

CM 2

CRN 6284-40-8  
 CMF C7 H17 N O5

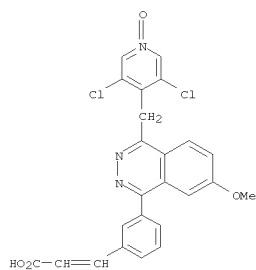
Absolute stereochemistry.



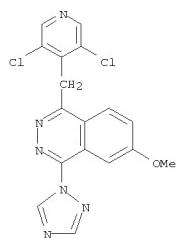
RN 717107-45-4 CAPLUS  
 CN 2-Propenoic acid, 3-[3-[4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl]phenyl]- (CA INDEX NAME)

L4 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN

(Continued)

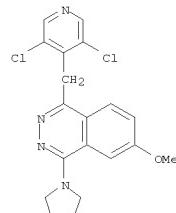


IT 256443-12-6 256443-32-0 256443-43-3  
 RL: PKT (Pharmacokinetics); BIOL (Biological study)  
 (preparation of (phenyl)(pyridinylmethyl)phthalazine derivs. as  
 phosphodiesterase 4 inhibitors)  
 RN 256443-12-6 CAPLUS  
 CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-4-(1H-1,2,4-triazol-1-yl)- (CA INDEX NAME)

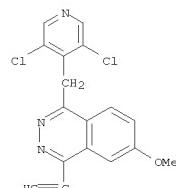


RN 256443-32-0 CAPLUS  
 CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-4-(1-pyrrolidinyl)- (CA INDEX NAME)

L4 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

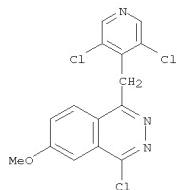


RN 256443-43-3 CAPLUS  
 Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-4-ethynyl-6-methoxy- (CA INDEX NAME)

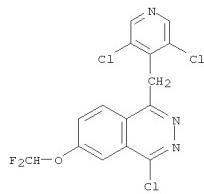


IT 256443-81-9 256443-97-7  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation of (phenyl)(pyridinylmethyl)phthalazine derivs. as  
 phosphodiesterase 4 inhibitors)  
 RN 256443-81-9 CAPLUS  
 CN Phthalazine, 4-chloro-1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy- (CA INDEX NAME)

L4 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

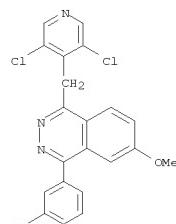


RN 256443-97-7 CAPLUS  
 CN Phthalazine, 4-chloro-1-[(3,5-dichloro-4-pyridinyl)methyl]-6-(difluoromethoxy)- (CA INDEX NAME)

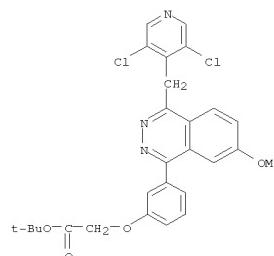


IT 717107-09-0P 717107-10-3P 717107-12-5P  
 717107-14-7P 717107-15-8P 717107-16-9P  
 717107-18-1P 717107-22-7P 717107-29-4P  
 717107-33-0P 717107-43-2P 717107-44-3P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (preparation of (phenyl)(pyridinylmethyl)phthalazine derivs. as  
 phosphodiesterase 4 inhibitors)  
 RN 717107-09-0 CAPLUS  
 CN Phenol,  
 3-[4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl]-  
 (CA INDEX NAME)

L4 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



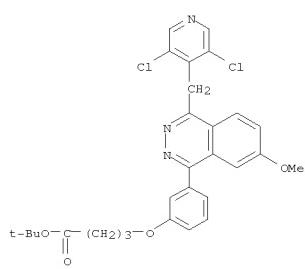
RN 717107-10-3 CAPLUS  
 CN Acetic acid, [3-[4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl]phenoxy]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



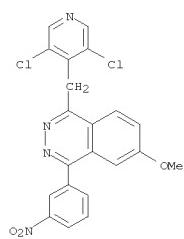
RN 717107-12-5 CAPLUS  
 Butanoic acid, 4-[3-[4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl]phenoxy]-, 1,1-dimethylethyl ester (CA INDEX NAME)

L4 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN

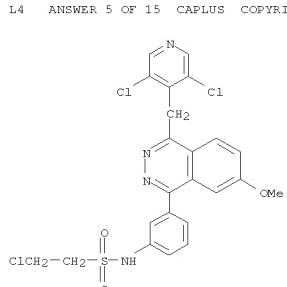
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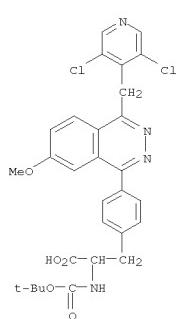
RN 717107-14-7 CAPLUS  
CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-4-(3-nitrophenyl)- (CA INDEX NAME)



RN 71710-7-15-8 CAPLUS  
CN Benzenamine, 3-[4-(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl- (CA INDEX NAME)



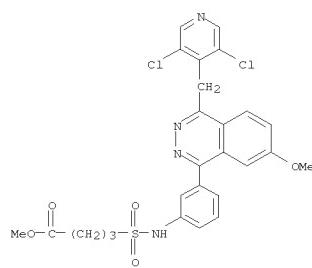
RN 71710-7-22-7 CAPLUS  
CN Phenylalanine, 4-[4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl]-N-[1,(1-dimethylethoxy)carbonyl]- (CA INDEX NAME)



RN 71710-7-29-4 CAPLUS  
CN Benzenecarbonitrile, 3-[4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl]-(CA INDEX NAME)

L4 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

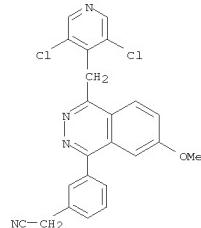
RN 717107-16-9 CAPLUS  
CN Butanoic acid, 4-[[3-[4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl]phenyl]amino]sulfonyl-, methyl ester (CA INDEX NAME)



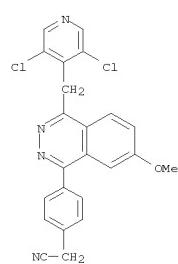
RN: 71710-78-1 CAPLUS  
CN: Ethanesulfonamide, 2-chloro-N-[3-[4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl]phenyl]- (CA INDEX NAME)

L4 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

L4 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



RN 71710-73-0 CAPLUS  
CN Benzenacetonitrile, 4-[4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-  
phthalazinyl]-(CA INDEX NAME)

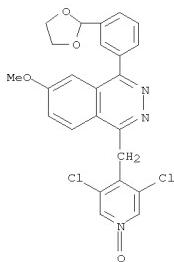


RN 71710-74-2 CAPLUS  
CN Fhthalazine, 1-[3,(5-dichloro-1-oxido-4-pyridinyl)methyl]-4-[3-(1,3-dioxolan-2-yl)phenyl]-6-methoxy- (CA INDEX NAME)

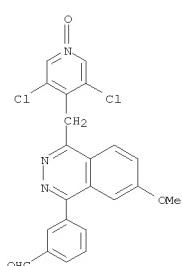
Haft e

04/10/2008

L4 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



RN 717107-44-3 CAPLUS  
 CN Benzaldehyde,  
 3-[4-[(3,5-dichloro-1-oxido-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl]- (CA INDEX NAME)



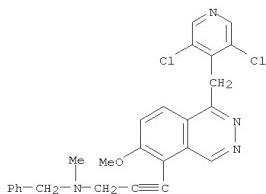
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 6 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2003:1006815 CAPLUS  
 DOCUMENT NUMBER: 140:35974  
 TITLE: Treatment for depression and anxiety by the combination of a PDE IV inhibitor and an antidepressant or an anxiolytic agent  
 INVENTOR(S): Sobolov-Jaynes, Susan Beth; Schmidt, Christopher Joseph  
 PATENT ASSIGNEE(S): Pfizer Products Inc., USA  
 SOURCE: PCT Int. Appl., 62 pp.  
 CODEN: PIXXDD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

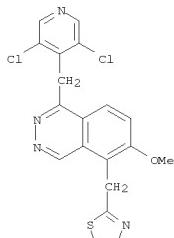
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003105902	A1	20031224	W 2003-IB2295	20030605
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BE, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GB, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KE, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RU: GH, GN, KE, LS, MM, ME, SD, SL, SZ, TE, UG, EM, BW, AM, AZ, BI, KG, KE, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 20030235631	A1	20031225	US 2003-387060	20030312
CA 2488138	A1	20031224	CA 2003-2488138	20030605
AU 2003233032	A1	20031231	AU 2003-233032	20030605
EP 1517707	A1	20050330	EP 2003-727833	20030605
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PI, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
BR 2003011903	A	20050607	BR 2003-11903	20030605
JP 2005533788	T	20051110	JP 2004-512802	20030605
MX 2004PA11835	A	20050331	MX 2004-PA11835	20041126
IN 2004CN03177	A	20060303	IN 2004-CN3177	20041213
PRIORITY APPLN. INFO.:			US 2002-389181P	P 20020617
			WO 2003-IB2295	W 20030605

OTHER SOURCE(S): MARPAT 140:35974  
 AB The present invention relates to a method of treating depression or anxiety in a mammal, including a human, by administering to the mammal a PDE IV inhibitor in combination with an antidepressant or an anxiolytic agent. It also relates to pharmaceutical compns. containing a pharmaceutically acceptable carrier, a PDE IV inhibitor and an anxiolytic agent or antidepressant.  
 IT 256443-69-3 636598-52-2 636598-53-3  
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (treatment for depression and anxiety by combination of a PDE IV inhibitor and an antidepressant or an anxiolytic agent)

L4 ANSWER 6 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)  
 RN 256443-69-3 CAPLUS  
 CN Benzenemethanamine,  
 N-[3-[1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-5-  
 phthalazinyl]-2-propynyl]-N-methyl- (9CI) (CA INDEX NAME)

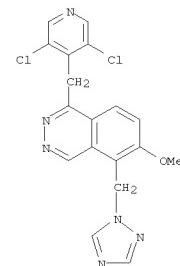


RN 636598-52-2 CAPLUS  
 CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-5-(2-thiazolylmethyl)- (CA INDEX NAME)



RN 636598-53-3 CAPLUS  
 CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-5-(1H-1,2,4-triazol-1-ylmethyl)- (CA INDEX NAME)

L4 ANSWER 6 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



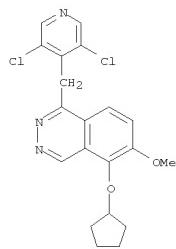
REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2003:521321 CAPLUS  
 DOCUMENT NUMBER: 139:239660  
 TITLE: Comparative molecular field analysis (CoMFA) of phthalazine derivatives as phosphodiesterase IV inhibitors  
 AUTHOR(S): Chakraborti, Asit K.; Gopalakrishnan, B.; Sobhia, M. Elizabeth; Malde, Alpeshkumar  
 CORPORATE SOURCE: Department of Medicinal Chemistry, National Institute of Pharmaceutical Education and Research (NIPER), S.A.S. Nagar, Punjab, 160 062, India  
 SOURCE: Biorganic & Medicinal Chemistry Letters (2003), 13(15), 2473-2479  
 PUBLISHER: Elsevier Science B.V.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB A comparative mol. field anal. (CoMFA) of phthalazine class of phosphodiesterase IV (PDE IV) inhibitors has been performed to correlate their chemical structures with their observed biol. activity. A statistically valid model with good correlative and predictive power is reported. The leave one out cross-validation study gave cross-validation  $r_{2cv}$  of value 0.507 at six optimum components and conventional  $r^2$  of value 0.98. The predictive ability of the model was tested by predicting the seven mol. belonging to the test set giving predictive correlation coefficient of 0.59. This model is potentially helpful in the design of novel and more potent PDE IV inhibitors.

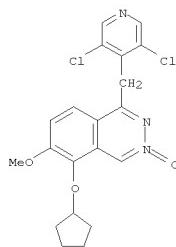
IT 228869-08-7 228869-09-8 228869-10-1  
 228869-12-3 228869-13-4 228869-14-5  
 228869-16-7 228869-17-8 256442-88-3  
 256443-09-1 256443-12-6 256443-15-9  
 256443-16-0 256443-21-7 256443-30-8  
 256443-32-0 256443-68-2 311339-04-5  
 599193-92-7 599193-93-8 599193-94-9  
 RL: PAC (Pharmacological activity); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (CoMFA of phthalazine derivs. as phosphodiesterase IV inhibitors)

RN 228869-08-7 CAPLUS  
 CN Phthalazine, 5-(cyclopentyloxy)-1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy- (CA INDEX NAME)

L4 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

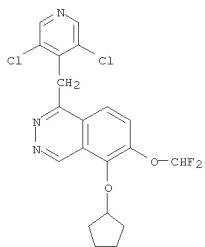


RN 228869-09-8 CAPLUS  
 CN Phthalazine, 5-(cyclopentyloxy)-1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-, 3-oxide (CA INDEX NAME)

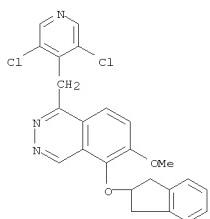


RN 228869-10-1 CAPLUS  
 CN Phthalazine, 5-(cyclopentyloxy)-1-[(3,5-dichloro-4-pyridinyl)methyl]-6-(difluoromethoxy)- (CA INDEX NAME)

L4 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

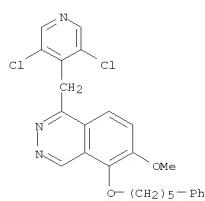


RN 228869-12-3 CAPLUS  
 CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-5-[(2,3-dihydro-1H-inden-2-yl)oxy]-6-methoxy- (CA INDEX NAME)

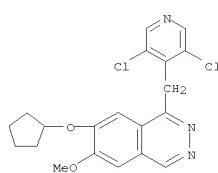


RN 228869-13-4 CAPLUS  
 CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-5-[(5-phenylpentyl)oxy]- (CA INDEX NAME)

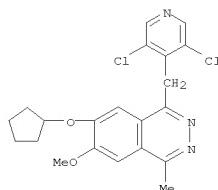
L4 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



RN 228869-14-5 CAPLUS  
 CN Phthalazine, 7-(cyclopentyloxy)-1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy- (CA INDEX NAME)

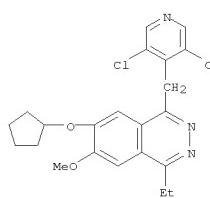


RN 228869-16-7 CAPLUS  
 CN Phthalazine, 6-(cyclopentyloxy)-4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-methyl- (CA INDEX NAME)

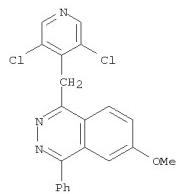


RN 228869-17-8 CAPLUS  
 CN Phthalazine, 6-(cyclopentyloxy)-4-[(3,5-dichloro-4-pyridinyl)methyl]-1-

L4 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN  
ethyl-7-methoxy- (CA INDEX NAME)

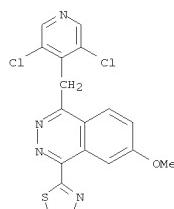


RN 256442-88-3 CAPLUS  
CN Phthalazine, 1-[ (3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-4-phenyl-  
(CA INDEX NAME)

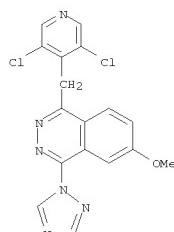


RN 256443-09-1 CAPLUS  
CN Phthalazine, 1-[ (3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-4-(2-thiazolyl)-  
(CA INDEX NAME)

L4 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

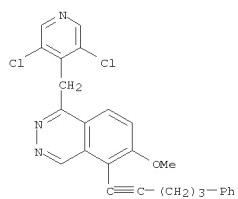


RN 256443-12-6 CAPLUS  
CN Phthalazine, 1-[ (3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-4-(1H-1,2,4-triazol-1-yl)- (CA INDEX NAME)



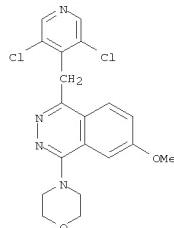
RN 256443-15-9 CAPLUS  
CN Phthalazine,  
1-[ (3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-5-(5-phenyl-1-pentenyl)- (9CI) (CA INDEX NAME)

L4 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

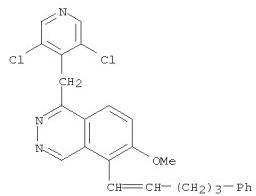


RN 256443-16-0 CAPLUS  
CN Phthalazine,  
1-[ (3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-5-(5-phenyl-1-pentenyl)- (9CI) (CA INDEX NAME)

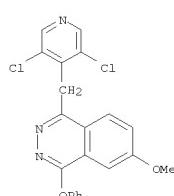
L4 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



RN 256443-30-8 CAPLUS  
CN Phthalazine, 1-[ (3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-4-phenoxy-  
(CA INDEX NAME)



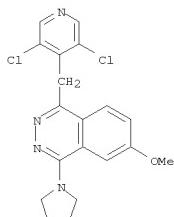
RN 256443-21-7 CAPLUS  
CN Phthalazine, 1-[ (3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-4-(4-morpholinyl)- (CA INDEX NAME)



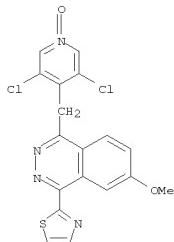
RN 256443-32-0 CAPLUS  
CN Phthalazine, 1-[ (3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-4-(1-pyrrolidinyl)- (CA INDEX NAME)

L4 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN

(Continued)

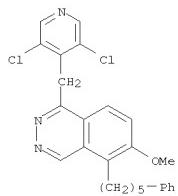


RN 256443-68-2 CAPLUS  
 CN Phthalazine, 1-[(3,5-dichloro-1-oxido-4-pyridinyl)methyl]-6-methoxy-4-(2-thiazolyl)- (CA INDEX NAME)

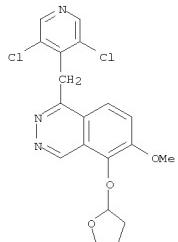


RN 311339-04-5 CAPLUS  
 CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-5-(5-phenylpentyl)- (CA INDEX NAME)

L4 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

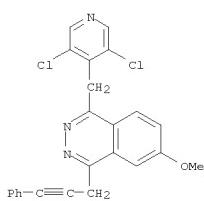


RN 599193-92-7 CAPLUS  
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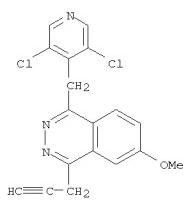


RN 599193-93-8 CAPLUS  
 CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-4-(3-phenyl-2-propynyl)- (9CI) (CA INDEX NAME)

L4 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

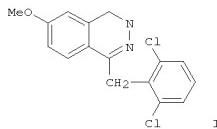


RN 599193-94-9 CAPLUS  
 CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-4-(2-propynyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

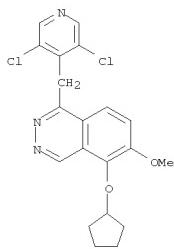
L4 ANSWER 8 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2001:900039 CAPLUS  
 DOCUMENT NUMBER: 136:325502  
 TITLE: Phthalazine PDE4 inhibitors. Part 3. The synthesis and in vitro evaluation of derivatives with a hydrogen bond acceptor  
 AUTHOR(S): Napoletano, Mauro; Norcini, Gabriele; Pellacini, Franco; Marchini, Francesco; Morazzoni, Gabriele; Fattori, Raimondo; Ferlenga, Pierpaolo; Pradella, Lorenzo  
 CORPORATE SOURCE: Ipharzam Ricerche, Zambon Group, Taverne, 6807, Switz.  
 SOURCE: Bioorganic & Medicinal Chemistry Letters (2001), Volume Date 2002, 12(1), 5-8  
 CODEN: BMCLB8; ISSN: 0960-894X  
 PUBLISHER: Elsevier Science Ltd.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 136:325502  
 GI



AB This communication describes the synthesis and in vitro evaluation of a novel and potent series of phthalazine phosphodiesterase type (IV) (PDE4) inhibitors, e.g., I (R = acyl). The interaction with two distinct polar binding sites allowed us to eliminate the cyclopentyloxy substitution from rolipram-like analogs.  
 IT 228869-08-7  
 RL: PAC (Pharmacological activity); RCT (Reactant); BIOL (Biological study); RACT (Reactant or reagent)  
 (phthalazine PDE4 inhibitors with hydrogen bond acceptor)  
 RN 228869-08-7 CAPLUS  
 CN Phthalazine, 5-(cyclopentyloxy)-1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy- (CA INDEX NAME)

L4 ANSWER 8 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN

(Continued)

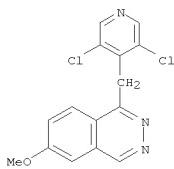


IT 256442-84-9P

RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)  
(phthalazine PDE4 inhibitors with hydrogen bond acceptor)

RN 256442-84-9 CAPLUS

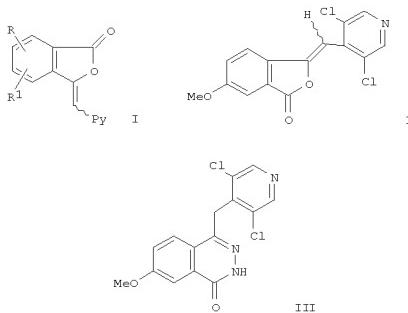
CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy- (CA INDEX NAME)



REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L4 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN

(Continued)



AB A process for the preparation of (pyridinylidene)phthalides I (Py = 2-, 3-, 4-pyridine substituted by one or more halogen, nitro, cyano, oxo, carboxy substituents; R R1 can be the same or different and are H, C1-C6 alkyl or OR2 where R2 = straight or branched C1-C6 alkyl, C4-C7 cycloalkyl or C1-C6 polyfluoroalkyl; double bond indicating both the E and Z isomers) was accomplished. II was prepared in quant. yield from 5-methoxy-3-oxo-1,3-dihydro-1-isobenzofuran carboxylic acid and 3,5-dichloropyridinecarbaldehyde. II was further reacted with HOAc and NH2NH2 H2O yielding 9% of III.

IT 256443-02-4P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of (pyridinylidene)phthalides)

RN 256443-02-4 CAPLUS

CN 1-(2H)-Phthalazinone, 4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy- (CA INDEX NAME)

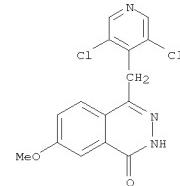
L4 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 2001:617996 CAPLUS  
DOCUMENT NUMBER: 135:195568  
TITLE: Process for preparing (pyridinylidene)phthalides  
INVENTOR(S): Napoletano, Mauro  
PATENT ASSIGNEE(S): Zambon Group S.P.A., Italy  
SOURCE: PCT Int. Appl., 15 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001060817	A1	20010823	WO 2001-EP1244	20010206
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BE, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MR, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, US, UZ, VN, YU, ZA, ZW, AM, AZ, BZ, KG, KZ, MD, RU, TJ, TM, RW: GH, GN, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG, R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, HE, SI, LT, LV, FI, RO, JP: 20030523341 T 20030805 JP 2001-560201 20010206 US 20030023094 A1 20030130 US 2001-958972 20011016 US 6706882 B2 20040316 US 20040068117 A1 20040408 US 2003-671525 20030929 US 6894164 B2 20050517 PRIORITY APPLN. INFO.: IT 2000-MI261 A 20000216 WO 2001-EP1244 W 20010206 US 2001-958972 A3 20011016				
IT 2000MIO261	A1	20010816	IT 2000-MI261	20000216
AU 2001054629	A5	20010827	AU 2001-54629	20010206
EP 1171436	A1	20020116	EP 2001-927650	20010206

OTHER SOURCE(S): CASREACT 135:195568; MARPAT 135:195568

GI

L4 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

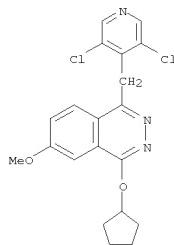


REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

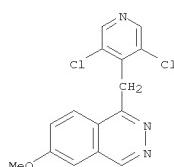
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L4 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2000:872655 CAPLUS  
 DOCUMENT NUMBER: 134:207774  
 TITLE: Phthalazine PDE4 inhibitors. Part 2: The synthesis  
 and  
 biological evaluation of 6-methoxy-1,4-disubstituted  
 derivatives  
 AUTHOR(S): Napoletano, M.; Norcini, G.; Pellacini, F.; Marchini,  
 F.; Morazzoni, G.; Ferlenga, P.; Pradella, L.  
 CORPORATE SOURCE: Zambon Group, Inpharzam Ricerche, Taverne, 6807,  
 Switz.  
 SOURCE: Bioorganic & Medicinal Chemistry Letters (2000),  
 Volume Date 2001, 11(1), 33-37  
 CODEN: BMCLB8; ISSN: 0960-894X  
 PUBLISHER: Elsevier Science Ltd.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 134:207774  
 AB This communication describes the synthesis and *in vitro* evaluation of a  
 novel and potent series of phosphodiesterase type IV (PDE4) inhibitors.  
 The compounds described present substituents in position 4 of the  
 phthalazine ring to replace the commonly observed cyclopentyloxy moiety  
 of  
 rolipram analogs. Preliminary evidences of reduced side effects compared  
 to stds. and improved pharmacokinetic properties for selected derivs. are  
 also reported.  
 IT 328941-80-6  
 RL: BAC (Biological activity or effector, except adverse); BSU  
 (Biological  
 study, unclassified); BIOL (Biological study)  
 (preparation of 6-methoxy-1,4-disubstituted phthalazine derivs. as  
 PDE4  
 inhibitors)  
 RN 328941-80-6 CAPLUS  
 CN Phthalazine, 4-(cyclopentyloxy)-1-[(3,5-dichloro-4-pyridinyl)methyl]-6-  
 methoxy- (CA INDEX NAME)

L4 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



IT 256442-84-9P 256442-87-2P 256442-88-3P  
 256442-89-4P 256443-09-1P 256443-10-4P  
 256443-11-5P 256443-12-6P 256443-21-7P  
 256443-27-3P 256443-28-4P 256443-30-8P  
 256443-31-9P 256443-32-0P 256443-43-3P  
 256443-60-2P 328941-82-8P  
 RL: BAC (Biological activity or effector, except adverse); BSU  
 (Biological  
 study, unclassified); SPN (Synthetic preparation); BIOL (Biological  
 study); PREP (Preparation)  
 (preparation of 6-methoxy-1,4-disubstituted phthalazine derivs. as  
 PDE4  
 inhibitors)  
 RN 256442-84-9 CAPLUS  
 CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy- (CA INDEX  
 NAME)

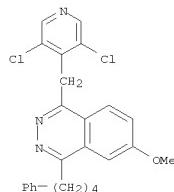


RN 256442-87-2 CAPLUS  
 CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-4-ethyl-6-methoxy- (CA  
 INDEX NAME)

L4 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)  
 INDEX NAME)

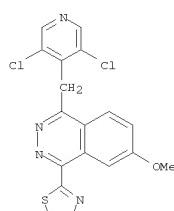
RN 256442-88-3 CAPLUS  
 CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-4-phenyl-  
 (CA  
 INDEX NAME)

L4 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

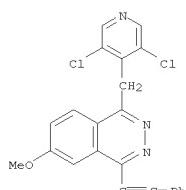


RN 256443-09-1 CAPLUS  
 CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-4-(2-thiazolyl)- (CA INDEX NAME)

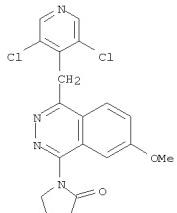
RN 256442-89-4 CAPLUS  
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 phenylbutyl)- (CA INDEX NAME)



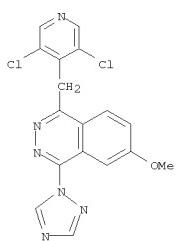
RN 256443-10-4 CAPLUS  
 CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-4-(phenylethynyl)- (9CI) (CA INDEX NAME)



L4 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)  
 RN 256443-11-5 CAPLUS  
 CN 2-Pyrrolidinone, 1-[4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl]-(CA INDEX NAME)

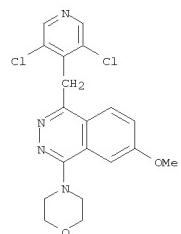


RN 256443-12-6 CAPLUS  
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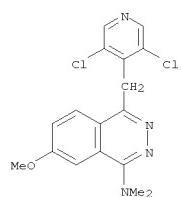


RN 256443-21-7 CAPLUS  
 CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-4-(4-morpholinyl)-(CA INDEX NAME)

L4 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



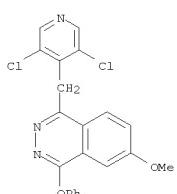
RN 256443-27-3 CAPLUS  
 CN 1-Phthalazinamine, 4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-N,N-dimethyl-(CA INDEX NAME)



RN 256443-28-4 CAPLUS  
 CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-4-(1H-imidazol-1-yl)-6-methoxy-(CA INDEX NAME)

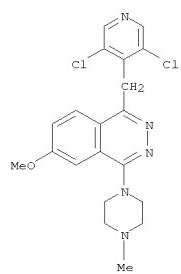
L4 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

RN 256443-30-8 CAPLUS  
 CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-4-phenoxy-(CA INDEX NAME)

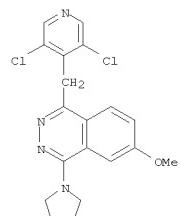


RN 256443-31-9 CAPLUS  
 CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-4-(4-methyl-1-piperazinyl)-(CA INDEX NAME)

L4 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



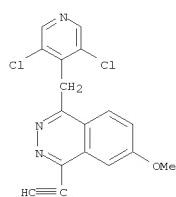
RN 256443-32-0 CAPLUS  
 CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-4-(1-pyrrolidinyl)-(CA INDEX NAME)



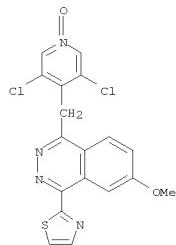
RN 256443-43-3 CAPLUS  
 CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-4-ethynyl-6-methoxy-(CA INDEX NAME)

L4 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN

(Continued)

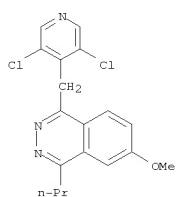


RN 256443-69-2 CAPLUS  
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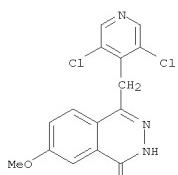
RN 328941-82-8 CAPLUS  
 CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-4-propyl- (CA INDEX NAME)

L4 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



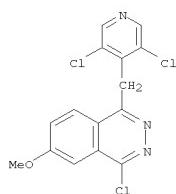
IT 256443-02-4P 256443-81-9P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation of 6-methoxy-1,4-disubstituted phthalazine derivs. as PDE4 inhibitors)

RN 256443-02-4 CAPLUS  
 CN 1(2H)-Phthalazinone, 4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy- (CA INDEX NAME)



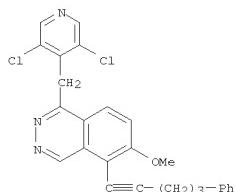
RN 256443-81-9 CAPLUS  
 CN Phthalazine, 4-chloro-1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy- (CA INDEX NAME)

L4 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

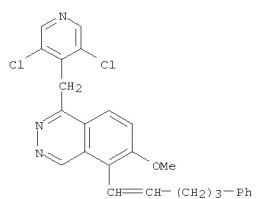
L4 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2000:656752 CAPLUS  
 DOCUMENT NUMBER: 134:29280  
 TITLE: The synthesis and biological evaluation of a novel series of phthalazine PDE4 inhibitors I  
 AUTHOR(S): Napoletano, M.; Norcini, G.; Pellacini, F.; Marchini, F.; Morazzoni, G.; Ferlenga, P.; Pradella, L.  
 CORPORATE SOURCE: Zambon Group, Inpharzam Ricerche, Cadempino, 6814, Svitz.  
 SOURCE: Bioorganic & Medicinal Chemistry Letters (2000), 10(19), 2235-2238  
 PUBLISHER: Elsevier Science Ltd.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 134:29280  
 AB This communication describes the synthesis and in vitro evaluation of a novel and potent series of phosphodiesterase type IV (PDE4) inhibitors. The compds. described represent conformationally constrained analogs of 73401, Piclamilast. Preliminary evidences of reduced side effects of 11 compared to stds. are also reported. An example compound thus prepared and tested was 7-(cyclopentyloxy)-1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxyphthalazine.  
 IT 256443-15-9P 256443-16-0P  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and activity of phthalazine derivs. as PDE-IV inhibitors)  
 RN 256443-15-9 CAPLUS  
 CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-5-(5-phenyl-1-pentenyl)- (9CI) (CA INDEX NAME)



RN 256443-16-0 CAPLUS  
 CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-5-(5-phenyl-1-pentenyl)- (9CI) (CA INDEX NAME)

L4 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN

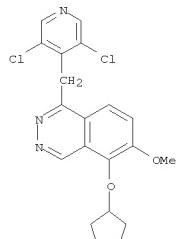
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IT 228869-09-7P 228869-09-8P 228869-10-1P  
228869-12-3P 228869-13-4P 228869-14-5P  
311339-00-1P 311339-04-5P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study; unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)  
(Preparation and activity of phthalazine derivs. as PDE-IV inhibitors)

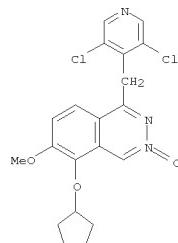
RN 228869-08-7 CAPLUS  
CN Phthalazine, 5-(cyclopentyloxy)-1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy- (CA INDEX NAME)



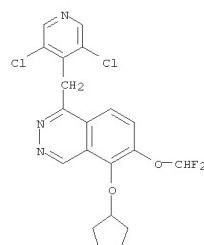
RN 228869-09-8 CAPLUS

CN Phthalazine, 5-(cyclopentyloxy)-1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-, 3-oxide (CA INDEX NAME)

L4 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

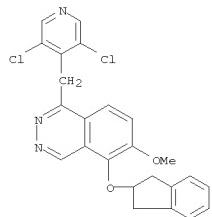


RN 228869-10-1 CAPLUS  
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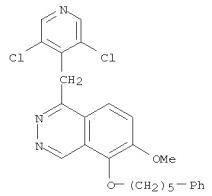
RN 228869-12-3 CAPLUS  
CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-5-[(2,3-dihydro-1H-inden-2-yl)oxy]-6-methoxy- (CA INDEX NAME)

L4 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



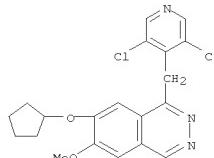
RN 228869-13-4 CAPLUS

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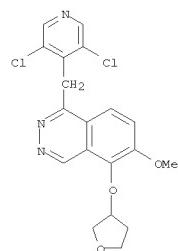


RN 228869-14-5 CAPLUS

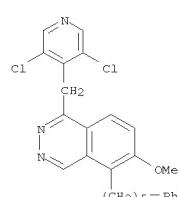
CN Phthalazine, 7-(cyclopentyloxy)-1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy- (CA INDEX NAME)



L4 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)  
RN 311339-00-1 CAPLUS  
CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-5-[(tetrahydro-3-furanyl)oxy]- (CA INDEX NAME)



RN 311339-04-5 CAPLUS  
CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-5-(5-phenylpentyl)- (CA INDEX NAME)

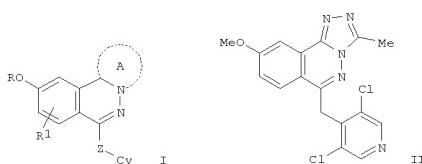


REFERENCE COUNT:  
THIS 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR  
RECORD. ALL CITATIONS AVAILABLE IN THE RE  
FORMAT

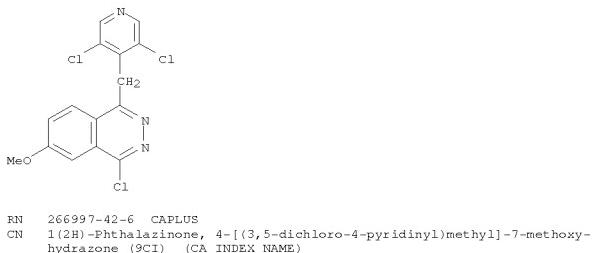
L4 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2000:314699 CAPLUS  
 DOCUMENT NUMBER: 132:321868  
 TITLE: Preparation of tricyclic phthalazine derivatives as phosphodiesterase 4 inhibitors  
 INVENTOR(S): Napoletano, Mauro; Norcini, Gabriele; Pellacini, Franco; Morazzone, Gabriele  
 PATENT ASSIGNEE(S): Zambon Group S.p.A., Italy  
 SOURCE: PCT Int. Appl., 28 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000026218	A1	20000511	WO 1999-EP7304	19991001
W: AU, CA, CZ, HU, IL, JP, KR, NZ, SI, US, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
IT 1303272	B1	20001106	IT 1998-MI2319	19981029
CA 2345337	A1	20000511	CA 1999-2345337	19991001
AU 9963324	A1	20000522	AU 1999-63324	19991001
AU 766129	B2	20031009		
EP 1124829	A1	20010822	EP 1999-950599	19991001
EP 1124829	B1	20040804		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI				
JP 2002528549	T	20020903	JP 2000-579606	19991001
AT 272638	T	20040815	AT 1999-950599	19991001
US 6525055	B1	20030225	US 2001-630679	20010430
PRIORITY APPLN. INFO.:			IT 1998-MI2319	A 19981029
			WO 1999-EP7304	W 19991001

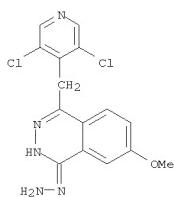
OTHER SOURCE(S): MARPAT 132:321868  
 GI



L4 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



RN 266997-42-6 CAPLUS  
 CN 1(2H)-Phthalazinone, 4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-, hydrazone (9CI) (CA INDEX NAME)



REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

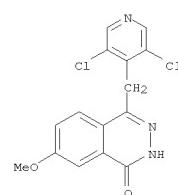
L4 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

AB The title compds. [I; A = (un)saturated (un)saturated 5-7 membered heterocycle containing 1-4 N atoms; Z = NH, CH<sub>2</sub>, (un)saturated alkylene optionally interrupted by cycloalkyl residue; Cy = (un)substituted Ph, heterocycle, COR<sub>4</sub> (wherein R<sub>4</sub> = OH, alkoxy, (un)substituted NH<sub>2</sub>); R = alkyl, polyfluoroalkyl; R<sub>1</sub> = H, alkyl, alkenyl, etc.), useful for the treatment of allergic and inflammatory pathologies (e.g., respiratory diseases), were prepared E.g., a multi-step synthesis of II which showed IC<sub>50</sub> of

207 nM against PDE IV, was given.

IT 256443-02-4P 256443-81-9P 266997-42-6P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

RN 256443-02-4 CAPLUS  
 CN 1(2H)-Phthalazinone, 4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy- (CA INDEX NAME)



RN 256443-81-9 CAPLUS  
 CN Phthalazine, 4-chloro-1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy- (CA INDEX NAME)

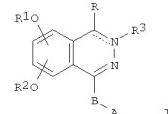
L4 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

ACCESSION NUMBER: 2000:84785 CAPLUS  
 DOCUMENT NUMBER: 132:122627  
 TITLE: Preparation of phthalazine derivatives as phosphodiesterase 4 inhibitors  
 INVENTOR(S): Napoletano, Mauro; Norcini, Gabriele; Grancini, Giancarlo; Pellacini, Franco; Morazzoni, Gabriele  
 PATENT ASSIGNEE(S): Zambon Group S.p.A., Italy  
 SOURCE: PCT Int. Appl., 42 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000005219	A1	20000203	WO 1999-EP5068	19990716
W: AU, CA, CZ, HU, IL, JP, KR, NZ, SI, US, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
IT 98MI1671	A1	20000121	IT 1998-MI1671	19980721
CA 2337954	A1	20000203	CA 1999-2337954	19990716
AU 23349116	A	20000214	AU 1999-49116	19990716
AU 766076	B2	20031009		
EP 1098866	A1	20010516	EP 1999-932894	19990716
R: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LI, LU, NL, SE, MC, PT, IE, FI				
HU 2001003349	A2	20020228	HU 2001-3349	19990716
HU 2001003349	A3	20030128		
JP 2002521371	T	20020716	JP 2000-561175	19990716
NZ 507930	A	20021126	NZ 1999-507930	19990716
ZA 2000006575	A	20020213	ZA 2000-6575	20001113
ZA 2000006577	A	20020213	ZA 2000-6577	20001113
US 6340684	B1	20020122	US 2001-764983	20010122
US 20020058662	A1	20020516	US 2001-987266	20011114
US 6498160	B2	20021224		

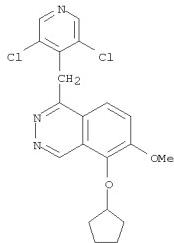
PRIORITY APPLN. INFO.: IT 1998-MI1671 A 19980721  
 WO 1999-EP5068 W 19990716  
 US 2001-764983 A1 20010122

OTHER SOURCE(S): MARPAT 132:122627  
 GI



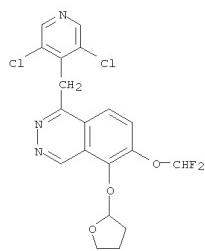
L4 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)  
 AB The title compds. [I; B = NH, CH<sub>2</sub>, alkylene chain optionally branched and/or unsatd. and/or interrupted by cycloalkyl; A = (un)substituted Ph, heterocyclyl; R = two H atoms, CO when a single bond is present or, when there is a double bond, R = H, (un)substituted aryl, heterocycl, etc.; R1 = alkyl, aryl, arylalkyl, etc.; R2 = alkyl, polyfluoroalkyl; R3 is absent when is a single bond], useful for treating allergic and inflammatory pathologies, and respiratory diseases, were prepared E.g.,

a synthesis of I [B = CH<sub>2</sub>; A = 3,5-dichloropyridin-4-yl; R = two H atoms; R1 = 5-(tetrahydrofuran-2-yl); R2 = 6-F2CH; R3 = MeSO<sub>2</sub>] which showed IC<sub>50</sub> of 8±0.5 nM against PDE 4, was given.  
 IT 228869-08-7P 256421-80-4P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation of phthalazine derivs. as phosphodiesterase 4 inhibitors)  
 RN 228869-08-7 CAPLUS  
 CN Phthalazine, 5-(cyclopentyloxy)-1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy- (CA INDEX NAME)



RN 256421-80-4 CAPLUS  
 CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-(difluoromethoxy)-5-[(tetrahydro-2-furyl)oxy]- (CA INDEX NAME)

L4 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)  
 ACCESSION NUMBER: 2000:84783 CAPLUS  
 DOCUMENT NUMBER: 132:122626  
 TITLE: Preparation of phthalazines as phosphodiesterase 4 inhibitors  
 INVENTOR(S): Napolitano, Mauro; Norcini, Gabriele; Grancini, Giancarlo; Pellacini, Franco; Leali, Gian Marco; Morazzoni, Gabriele  
 PATENT ASSIGNEE(S): Zambon Group S.p.A., Italy  
 SOURCE: PCT Int. Appl., 88 pp.  
 CODEN: PIXXD2

DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1

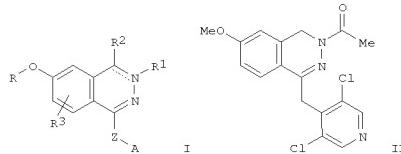
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000005210	A1	20000203	WO 1999-EP4904	19990713
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, US, US, VN, YU, ZA, ZW				
FW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
IT 98MI1670	A1	20000121	IT 1998-MI1670	19980721
CA 2338044	A1	20000203	CA 1999-2338044	19990713
AU 9952810	A	20000214	AU 1999-52810	19990713
AU 765457	B2	20030918		
BR 9911175	A	20010320	BR 1999-11175	19990713
EP 1097142	A1	20010509	EP 1999-938229	19990713
EP 1097142	B1	20041013		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO,				
HU 2001002646	A2	20011228	HU 2001-2646	19990713
HU 2001002646	A3	20030128		
EE 200100039	A	20020617	EE 2001-39	19990713
JP 2002521370	T	20020716	JP 2000-561174	19990713
NZ 507926	A	20021025	NZ 1999-507926	19990713
CN 1127486	B	20031112	CN 1999-807294	19990713
EP 1371648	A1	20031217	EP 2003-102377	19990713
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
AT 279397	T	20041015	AT 1999-938229	19990713
TW 509682	B	20021111	TW 1999-88112218	19990719
BG 1050563	A	20010731	BG 2000-105063	20001218
IN 2001CN00065	A	20050304	IN 2001-CN65	20010112
NO 2001000331	A	20010320	NO 2001-331	20010119
NO 318988	B1	20050530		
MX 2001PA00670	A	20020514	MX 2001-PA670	20010119
US 6329370	B1	20011211	US 2001-743813	20010122
HR 2001000057	A1	20020430	HR 2001-57	20010122
US 6492360	B1	20021210	US 2001-976436	20010115
HK 1039124	A1	20050401	HK 2002-100584	20020125
PRIORITY APPLN. INFO.:		IT 1999-MI1670	A 19990713	
		EP 1999-938229	A3 19990713	

L4 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)  
 WO 1999-EP4904 W 19990713

US 2001-743813 A1 20010122

OTHER SOURCE(S): MARPAT 132:122626  
 GI



AB The title compds. [I; Z = NH, CH<sub>2</sub>, alkylene optionally branched and/or unsatd. and/or interrupted by a cycloalkyl; A = (un)substituted Ph, heterocyclyl; R = alkyl, polyfluoroalkyl; R1 is absent when a double bond is present, or, when there is a single bond, R1 = H, alkyl optionally substituted by aryl, heterocycl or by a COR<sub>5</sub> (wherein R<sub>5</sub> = OH, alkoxy, hydroxamino), COR<sub>6</sub> (R<sub>6</sub> = H, aryl, arylalkyl, etc.), alkylsulfonyl; R2 = two H atoms or group =O when a single bond is present, or, when there is a double bond, R2 = H, CN, alkoxy carbonyl, etc.; R3 = H, alkyl, alkenyl, etc.] which are PDE 4 and TNF<sub>α</sub> release inhibitors, and thus are useful in treating allergic and inflammatory diseases such as respiratory diseases, were prepared E.g. two alternative preps. of compound II which

showed IC<sub>50</sub> of 51±7 nM against PDE 4, were given.

IT 256442-84-9P 256442-88-3P 256443-02-4P  
 256443-12-6P 256443-15-9P 256443-18-2P  
 256443-22-8P 256443-42-2P

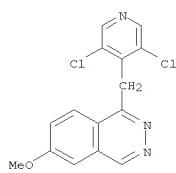
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(preparation of phthalazines as phosphodiesterase 4 inhibitors)  
 RN 256442-84-9 CAPLUS

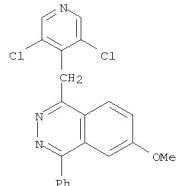
CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy- (CA INDEX NAME)

L4 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN

(Continued)

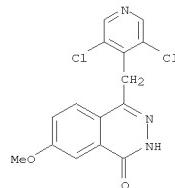


RN 256442-88-3 CAPLUS  
CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-4-phenyl-  
(CA INDEX NAME)

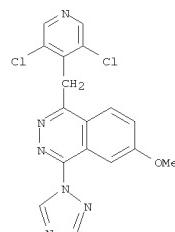


RN 256443-02-4 CAPLUS  
CN 1(2H)-Phthalazinone, 4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy- (CA INDEX NAME)

L4 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

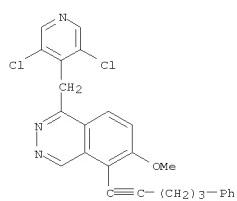


RN 256443-12-6 CAPLUS  
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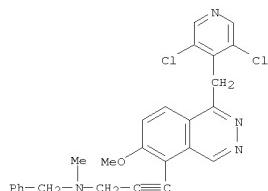


RN 256443-15-9 CAPLUS  
CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-5-(5-phenyl-1-pentylynyl)- (PCI) (CA INDEX NAME)

L4 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



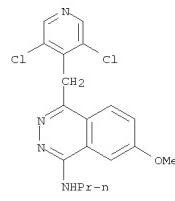
RN 256443-18-2 CAPLUS  
CN Benzenemethanamine,  
N-[3-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-5-phthalazinyl]-2-propynyl]-N-methyl-, dihydrochloride (9CI) (CA INDEX NAME)



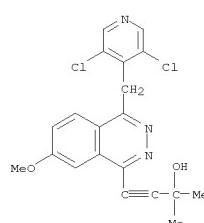
● 2 HCl

RN 256443-22-8 CAPLUS  
CN 1-Phthalazinamine,  
4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-N-propyl- (CA INDEX NAME)

L4 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



RN 256443-42-2 CAPLUS  
CN 3-Butyne-2-ol, 4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl]-2-methyl- (CA INDEX NAME)

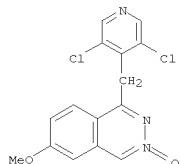


IT 256442-85-0P 256442-86-1P 256442-87-2P  
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256443-16-0P 256443-17-1P 256443-19-3P  
256443-20-6P 256443-21-7P 256443-27-3P  
256443-28-4P 256443-29-5P 256443-30-8P  
256443-31-9P 256443-32-0P 256443-35-3P  
256443-36-4P 256443-37-5P 256443-38-6P  
256443-39-7P 256443-40-0P 256443-41-1P  
256443-43-3P 256443-44-4P 256443-45-5P  
256443-58-0P 256443-64-8P 256443-65-9P  
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256443-69-3P

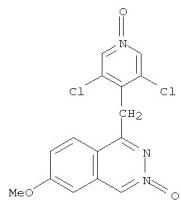
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of phthalazines as phosphodiesterase 4 inhibitors)

RN 256442-85-0 CAPLUS  
CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-, 3-oxide (CA INDEX NAME)

L4 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)  
INDEX NAME)

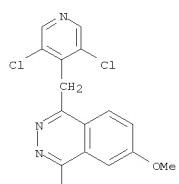


RN 256442-86-1 CAPLUS  
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3-oxide (CA INDEX NAME)

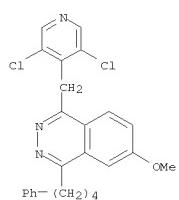


RN 256442-87-2 CAPLUS  
CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-4-ethyl-6-methoxy- (CA  
INDEX NAME)

L4 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

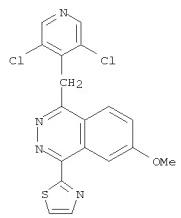


RN 256442-89-4 CAPLUS  
CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-4-(4-phenylbutyl)- (CA INDEX NAME)



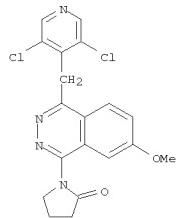
RN 256443-09-1 CAPLUS  
CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-4-(2-thiazolyl)- (CA INDEX NAME)

L4 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



RN 256443-10-4 CAPLUS  
CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-4-(phenylethylnyl)- (9CI) (CA INDEX NAME)

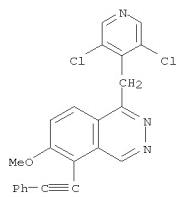
L4 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



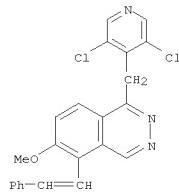
RN 256443-13-7 CAPLUS  
CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-5-(phenylethylnyl)- (9CI) (CA INDEX NAME)



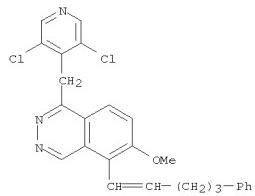
RN 256443-11-5 CAPLUS  
CN 2-Pyrrolidinone, 1-[4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl]- (CA INDEX NAME)



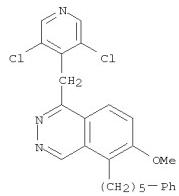
RN 256443-14-8 CAPLUS  
CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-5-(2-phenylethenyl)- (CA INDEX NAME)



L4 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)  
 RN 256443-16-0 CAPLUS  
 CN Phthalazine,  
 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-5-(5-phenyl-1-pentenyl)- (9CI) (CA INDEX NAME)



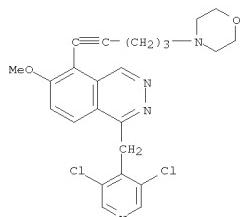
RN 256443-17-1 CAPLUS  
 CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-5-(5-phenylpentyl)-, monohydrochloride (9CI) (CA INDEX NAME)



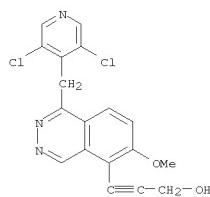
● HCl

RN 256443-19-3 CAPLUS  
 CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-5-[5-(4-morpholinyl)-1-pentenyl]-, dihydrochloride (9CI) (CA INDEX NAME)

L4 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



RN 256443-20-6 CAPLUS  
 CN 2-Propyn-1-ol, 3-[1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-5-phthalazinyl]- (CA INDEX NAME)



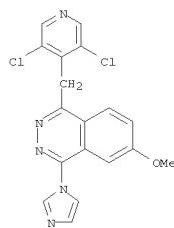
RN 256443-21-7 CAPLUS  
 CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-4-(4-morpholinyl)- (CA INDEX NAME)

L4 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



RN 256443-27-3 CAPLUS  
 CN 1-Phthalazinamine, 4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-N,N-dimethyl- (CA INDEX NAME)

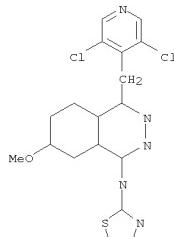
L4 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



RN 256443-29-5 CAPLUS  
 CN 1-Phthalazinamine, 4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-N-2-thiazolyl- (CA INDEX NAME)



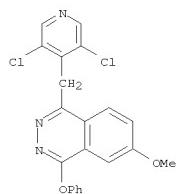
RN 256443-28-4 CAPLUS  
 CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-4-(1H-imidazol-1-yl)-6-methoxy- (CA INDEX NAME)



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE  
 RN 256443-30-8 CAPLUS  
 CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-4-phenoxy- (CA INDEX NAME)

L4 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN

(Continued)

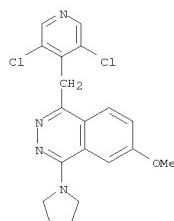


RN 256443-31-9 CAPLUS

CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-4-(4-methyl-1-piperazinyl)- (CA INDEX NAME)

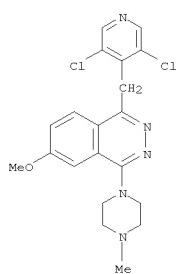
L4 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN

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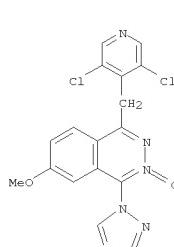
RN 256443-35-3 CAPLUS

CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-4-(1H-1,2,4-triazol-1-yl)-, 3-oxide (CA INDEX NAME)



RN 256443-32-0 CAPLUS

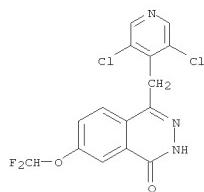
CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-4-(1-pyrrolidinyl)- (CA INDEX NAME)



RN 256443-36-4 CAPLUS

CN 1(2H)-Phthalazinone, 4-[(3,5-dichloro-4-pyridinyl)methyl]-7-(difluoromethoxy)- (CA INDEX NAME)

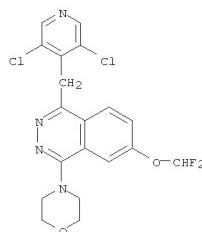
L4 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



RN 256443-37-5 CAPLUS

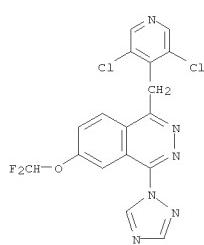
CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-(difluoromethoxy)-4-(1H-1,2,4-triazol-1-yl)- (CA INDEX NAME)

L4 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



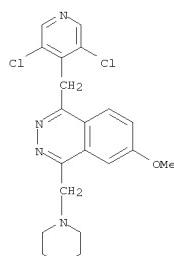
RN 256443-39-7 CAPLUS

CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-4-(4-morpholinylmethyl)- (CA INDEX NAME)



RN 256443-38-6 CAPLUS

CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-(difluoromethoxy)-4-(4-morpholinyl)- (CA INDEX NAME)

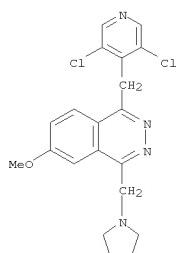


RN 256443-40-0 CAPLUS

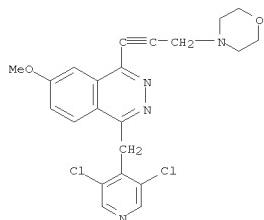
CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-4-(1-pyrrolidinylmethyl)- (CA INDEX NAME)

L4 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN

(Continued)

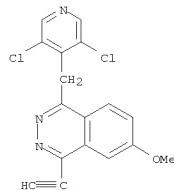


RN 256443-41-1 CAPLUS  
CN Phthalazine, 1-[3-(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-4-[3-(4-morpholinyl)-1-propynyl]- (9CI) (CA INDEX NAME)

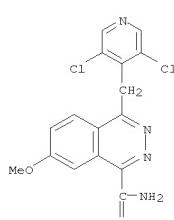


RN 256443-43-3 CAPLUS  
CN Phthalazine, 1-[3-(3,5-dichloro-4-pyridinyl)methyl]-4-ethynyl-6-methoxy- (CA INDEX NAME)

L4 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

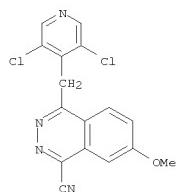


RN 256443-44-4 CAPLUS  
CN 1-Phthalazinecarboxamide, 4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy- (CA INDEX NAME)



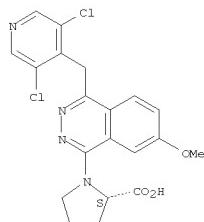
RN 256443-45-5 CAPLUS  
CN 1-Phthalazinecarbonitrile,  
4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy- (CA INDEX NAME)

L4 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



RN 256443-58-0 CAPLUS  
CN L-Proline, 1-[4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-phthalazinyl]-, sodium salt (9CI) (CA INDEX NAME)

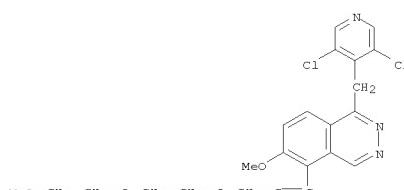
Absolute stereochemistry.



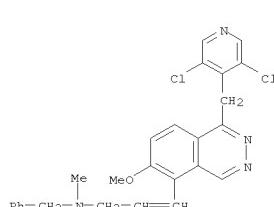
● Na

RN 256443-64-8 CAPLUS  
CN Phthalazine, 1-[3-(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-5-[3-[2-(2-methoxyethoxy)ethoxy]-1-propynyl]- (9CI) (CA INDEX NAME)

L4 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



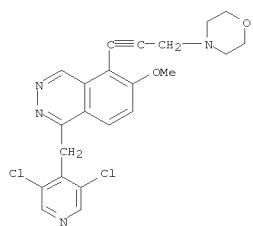
RN 256443-65-9 CAPLUS  
CN Benzenemethanamine,  
N-[3-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-5-phthalazinyl]-2-propenyl]-N-methyl- (9CI) (CA INDEX NAME)



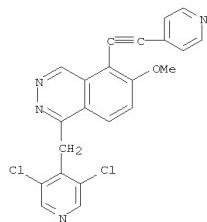
RN 256443-66-0 CAPLUS  
CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-5-[3-(4-morpholinyl)-1-propynyl]- (9CI) (CA INDEX NAME)

L4 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN

(Continued)

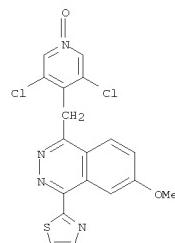


RN 256443-67-1 CAPLUS  
 CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-5-(4-pyridinylethynyl)- (9CI) (CA INDEX NAME)

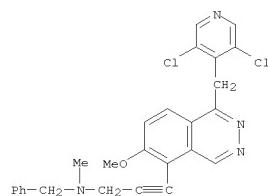


RN 256443-68-2 CAPLUS  
 CN Phthalazine, 1-[(3,5-dichloro-1-oxido-4-pyridinyl)methyl]-6-methoxy-4-(2-thiazolyl)- (CA INDEX NAME)

L4 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

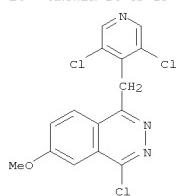


RN 256443-69-3 CAPLUS  
 CN Benzenemethanamine,  
 N-[3-[(1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-5-phthalazinyl)-2-propynyl]-N-methyl- (9CI) (CA INDEX NAME)

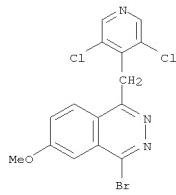


IT 256443-81-9P 256443-82-OP 256443-89-7P  
 256443-90-OP 256443-91-1P 256443-97-7P  
 256443-98-8P 256443-99-9P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 [preparation of phthalazines as phosphodiesterase 4 inhibitors]  
 RN 256443-81-9 CAPLUS  
 CN Phthalazine, 4-chloro-1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy- (CA INDEX NAME)

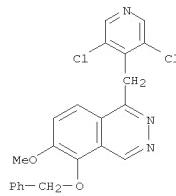
L4 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



RN 256443-82-0 CAPLUS  
 CN Phthalazine, 4-bromo-1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy- (CA INDEX NAME)

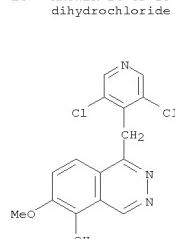


RN 256443-89-7 CAPLUS  
 CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-5-(phenylmethoxy)- (CA INDEX NAME)



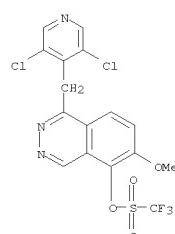
RN 256443-90-0 CAPLUS  
 CN 5-Phthalazinol, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-,

L4 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



●2 HCl

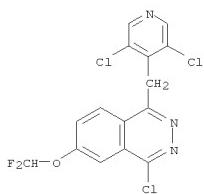
RN 256443-91-1 CAPLUS  
 CN Methanesulfonic acid, trifluoro-, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-5-phthalazinyl ester (9CI) (CA INDEX NAME)



RN 256443-97-7 CAPLUS  
 CN Phthalazine, 4-chloro-1-[(3,5-dichloro-4-pyridinyl)methyl]-6-(difluoromethoxy)- (CA INDEX NAME)

L4 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN

(Continued)

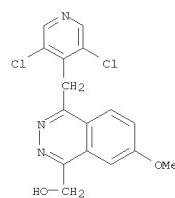


RN 256443-98-8 CAPLUS

CN 1-Phthalazinecarboxylic acid, 4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-, methyl ester (CA INDEX NAME)

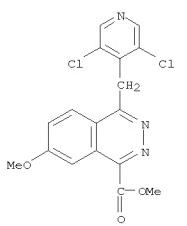
L4 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN

(Continued)



REFERENCE COUNT:

3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT



RN 256443-99-9 CAPLUS

CN 1-Phthalazinecarboxylic acid, 4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy- (CA INDEX NAME)

L4 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:421661 CAPLUS

DOCUMENT NUMBER: 131:73662

TITLE: Preparation of phthalazine derivatives as phosphodiesterase 4 and TNF $\alpha$  inhibitors

INVENTOR(S): Napolitano, Mauro; Norcini, Gabriele; Botta, Daniela; Grancini, Giancarlo; Morazzoni, Gabriele; Santangelo, Francesco; Siro Herrero, Jorge G.; Garcia Navio, Jose Luis; Alvarez-Builla, Julio G.

PATENT ASSIGNEE(S): Zambon Group S.p.A., Italy

SOURCE: PCT Int'l. Appl., 50 pp.

CODEN: PIIXD2

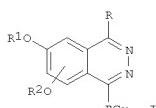
DOCUMENT TYPE: Patent

LANGUAGE: English

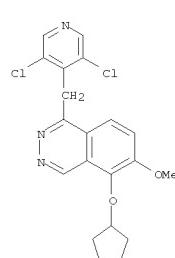
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9932456	A1	19990701	WO 1998-EP8291	19981217
W: AL, AM, AT, AU, AZ, BA, BE, BG, BR, BY, CA, CH, CN, CO, CZ, DE, DK, EE, ES, FI, GB, GR, HU, IE, IL, IS, JP, KE, KG, KP, KR, KE, LC, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RO, TJ, TM, FW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9926132	A	19990712	AU 1999-26132	19981217
EP 1042300	A1	20001011	EP 1998-966900	19981217
EP 1042300	B1	20040211		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE,				
FI				
JP 2001526270	T	20011218	JP 2000-525393	19981217
AT 259356	T	20040215	AT 1998-966900	19981217
PT 1042300	T	20040630	PT 1998-966900	19981217
ES 2216354	T3	20041016	ES 1998-966900	19981217
US 6589951	B1	20030708	US 2000-581506	20000810
US 20040043999	A1	20040304	US 2003-441177	20030520
PRIORITY APPLN. INFO.:				
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			WO 1998-EP8291	W 19981217
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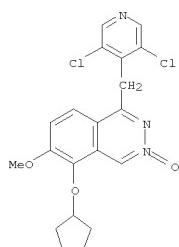
OTHER SOURCE(S): MARPAT 131:73662  
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L4 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

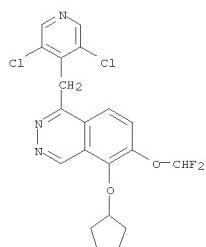
AB The title compdr. I [B = alkylene, amino, CONH, bond; Cy is optionally substituted; Ph or heteroaryl; R = H, Ph, (C1-4)alkyl optionally substituted; R1 = (C1-6)alkyl, polyfluoro (C1-6)-alkyl; R2 = (C4-7)cycloalkyl optionally containing an oxygen atom and optionally substituted], PDE 4 and TNF $\alpha$  inhibitors, were prepared. E.g., 7-cyclopentyloxy-1-(3,5-dichloropyridin-4-ylmethyl)-6-methoxyphthalazine was preparedIT 228869-09-7P 228869-09-8P 228869-10-1P  
228869-12-3P 228869-13-4P 228869-14-5P  
228869-16-7P 228869-17-8P 228869-18-9P  
228869-19-0P 228869-20-3P 228869-21-4P  
228869-22-5P 228869-23-6P 228869-24-7P  
228869-26-9PRL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses); (preparation of phthalazines as phosphodiesterase 4 and TNF $\alpha$  inhibitors)RN 228869-08-7 CAPLUS  
CN Phthalazine, 5-(cyclopentyloxy)-1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy- (CA INDEX NAME)RN 228869-09-8 CAPLUS  
CN Phthalazine, 5-(cyclopentyloxy)-1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-, 3-oxide (CA INDEX NAME)

L4 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN

(Continued)

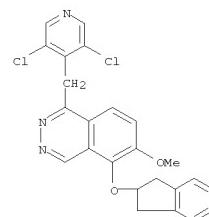


RN 228869-10-1 CAPLUS  
CN Phthalazine, 5-(cyclopentyloxy)-1-[(3,5-dichloro-4-pyridinyl)methyl]-6-(difluoromethoxy)- (CA INDEX NAME)

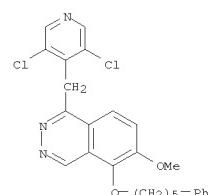


RN 228869-12-3 CAPLUS  
CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-5-[(2,3-dihydro-1H-inden-2-yl)oxy]-6-methoxy- (CA INDEX NAME)

L4 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

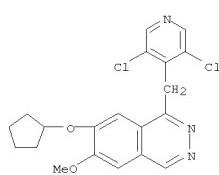


RN 228869-13-4 CAPLUS  
CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-5-[(5-phenylpentyl)oxy]- (CA INDEX NAME)

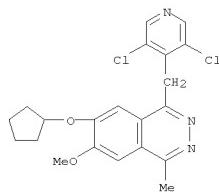


RN 228869-14-5 CAPLUS  
CN Phthalazine, 7-(cyclopentyloxy)-1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy- (CA INDEX NAME)

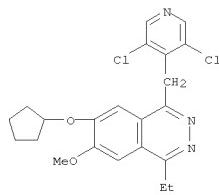
L4 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



RN 228869-16-7 CAPLUS  
CN Phthalazine, 6-(cyclopentyloxy)-4-[(3,5-dichloro-4-pyridinyl)methyl]-7-methoxy-1-methyl- (CA INDEX NAME)

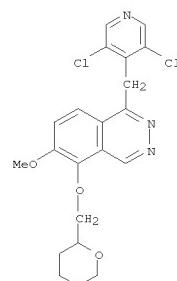


RN 228869-17-8 CAPLUS  
CN Phthalazine, 6-(cyclopentyloxy)-4-[(3,5-dichloro-4-pyridinyl)methyl]-1-ethyl-7-methoxy- (CA INDEX NAME)

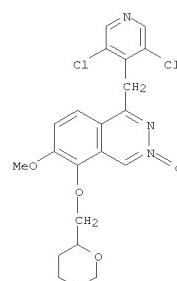


RN 228869-18-9 CAPLUS  
CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-5-[(tetrahydro-2H-pyran-3-yl)oxy]-

L4 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



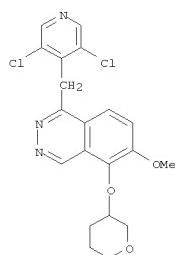
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CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-methoxy-5-[(tetrahydro-2H-pyran-3-yl)oxy]-, 3-oxide (CA INDEX NAME)



RN 228869-20-3 CAPLUS  
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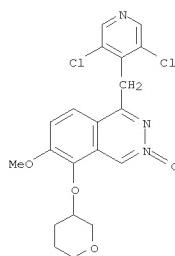
L4 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN

(Continued)



RN 228869-21-4 CAPLUS

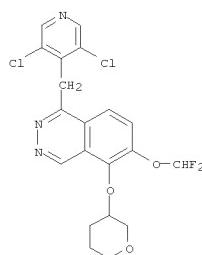
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RN 228869-22-5 CAPLUS

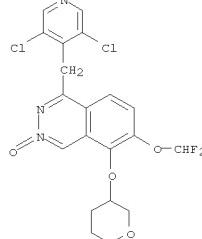
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L4 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



RN 228869-23-6 CAPLUS

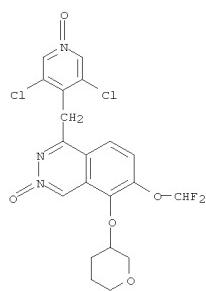
CN Phthalazine, 1-[(3,5-dichloro-4-pyridinyl)methyl]-6-(difluoromethoxy)-5-[(tetrahydro-2H-pyran-3-yl)oxy]-, 3-oxide (CA INDEX NAME)



RN 228869-24-7 CAPLUS

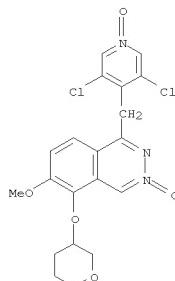
CN Phthalazine, 1-[(3,5-dichloro-1-oxido-4-pyridinyl)methyl]-6-(difluoromethoxy)-5-[(tetrahydro-2H-pyran-3-yl)oxy]-, 3-oxide (CA INDEX NAME)

L4 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



RN 228869-26-9 CAPLUS

CN Phthalazine, 1-[(3,5-dichloro-1-oxido-4-pyridinyl)methyl]-6-methoxy-5-[(tetrahydro-2H-pyran-3-yl)oxy]-, 3-oxide (CA INDEX NAME)

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2

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